

Focus, Predication, and Polarity in Kwak'wala

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Abstract

In this dissertation, I investigate the formal semantics and pragmatics of alternative focus in Kwak’wala, a critically endangered Northern Wakashan language of British Columbia, Canada.

I show that several notable phenomena and outstanding mysteries of Kwak’wala grammar involve focus expression, and by making their discourse contexts explicit we can observe how changes in discourse-relevant alternatives correspond to changes in morphosyntactic expression. These observations invite reappraisals of classic claims about Kwak’wala and Wakashan grammar, such as the claims that Kwak’wala lacks a noun/verb/adjective distinction (Boas et al., 1947, p. 280) and also lacks a copula (Boas et al., 1947, p. 205). Instead, I argue that Kwak’wala does indeed have a noun/verb/adjective distinction as well as equative (but not predicative) copulas, and show that these are tied up closely with the expression of focus. I argue, contra Koch’s (2008) proposal for Nl̓eʔkepmxc̓ín focus, that Kwak’wala focus is not based on alignment to the edges of prosodic phrases, but based on the use of marked predication structures in which speakers choose non-optimal predicates like NPs and DPs over unmarked predicates like VPs.

I also examine Kwak’wala additive and exclusive focus operators, and in particular investigate their distinctive association patterns, in which different exclusive operators associate with different types of “focus phrase” (cf. Drubig, 1994), while additive operators exhibit free association. I propose a hybrid focus model, a combination of the models in Wold (1996), Roberts (2012), and Krifka (2006), among others, in which Kwak’wala focus operators associate with focus phrases, but derive their specific alternatives indirectly, through constraints on a contextual “question under discussion” variable.

Finally, I examine the ubiquitous “discourse” enclitic $=\lambda m$, which I propose expresses a discourse-relevant bipolar (e.g., $\{P, \neg P\}$) contrast, and thereby distinguishes bipolar from monopolar (e.g., $\{P\}$) questions and answers (cf. Krifka, 2013). The appearance of $=\lambda m$ in all additive and exclusive sentences provides morphological evidence that such sentences respond to complex alternative sets consisting of both constituent-type and polar-type contrasts (cf. Krifka, 1998; Rullmann, 2003).

Preface

This dissertation consists of original and independent work by Patrick William Littell. It is based on field research with first-language speakers of Kwak’wala, and is covered by UBC Ethics Certificate H08-01182, “The Representation of Focus in Languages of the Pacific Northwest”.

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List of Abbreviations

1	First-person
1EXCL	First-person exclusive
1INCL	First-person inclusive
1POSS	Possessed by the first person
2	Second-person
2POSS	Possessed by the second person
3DIST	Third-person distal
3MED	Third-person medial
3POSS	Possessed by a third person (of any deictic class)
3POSS.REFL	Possessed by a 3rd person coreferent with the subject (or potentially the topic)
3PROX	Third-person proximal
A	Any of various suffixes or enclitics with the underlying form /a/; these can be rather difficult to distinguish so A serves as the gloss when its meaning is unclear. In cases when it is unimportant to the illustration I often treat this /a/ as if were just part of the previous or following morpheme.
ACC	Accusative case
APPOS	Appositive
AUG	Augmentative
CAUS	Causative
CHANGE	Change of state; includes inchoative and perfective-like readings
CLASS.NMZ	A nominalizer that derives class terms
CONN	Connector; used as an enclitic host or separator after the first-person enclitic
DET	Determiner
DIMIN	Diminutive

EMBED	Embedded
FUT	Future
HYP	Hypothetical
INDEF	An indefinite element parallel to the general WH element
INSTR	Instrumental nominalizer
INVIS	Invisible; along with VIS, this morpheme differs depending on the deictic category of its determiner phrase, but since this is predictable I do not usually gloss the deictic category
MODAL	One of several epistemic modals of uncertain strength
NMZ	Used for any nominalizer with no more specific interpretation, or a range of interpretations that defy abbreviation
OBL	Oblique case
ONGOING	Used for various ongoing (e.g., imperfective, durative, etc.) actions
ONGOING.POS	Similar to ONGOING, but usually describing a maintained posture or position
PART	Participle, result nominalizer
PASS	Passive
PAST	Past
PL	Plural
PLACE	Place nominalizer, also used for abstracts
PRSNTV	Presentative
POSS	Possessive
PREP	Preposition
QUES	Question
REC.PAST	Recent past
RECIP	Reciprocal
REDUP	Reduplicant
REL	Related, usually used for an ownership relation
STIM	Stimulus nominalizer
VER	Verum; marks affirmative answers to yes/no questions, certain yes/no questions themselves, and a variety of other sentences
VIS	Visible; along with INVIS, this morpheme differs depending on the deictic category of its determiner phrase, but since this is predictable I do not usually gloss the deictic category
WH	A generic WH element corresponding to a variety of question words in English

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Part I

Introduction

Chapter 1

Overview

1.1 Topic of investigation

In this investigation, I examine the formal semantics and pragmatics of alternative focus in the Kwak’wala language. Kwak’wala is a critically endangered Northern Wakashan language of British Columbia, Canada, spoken on northern Vancouver Island, the adjacent mainland, and the islands in between. While narrative Kwak’wala is comparatively well-documented, there has been little documentation of conversational Kwak’wala and little investigation into interactional phenomena like question-answering.

I am investigating “focus” in its contemporary formal semantic sense – that is, I take “focus” to be a phenomenon by which speakers invoke or reveal that alternatives (in the sense of Rooth, 1985, 1992) are relevant to the interpretation of their utterances (Krifka, 2007). Such alternatives are ubiquitous in discourse – the alternatives introduced by questions or disjunctions, the alternatives contradicted or contrasted in contrastive sentences, the alternatives excluded by “only” sentences, the alternatives presupposed by “also” sentences – but they are not always made explicit. Using the same expressive capabilities that they use to answer questions or draw contrasts, speakers sometimes answer questions that no one has explicitly asked, or draw contrasts with propositions no one has explicitly voiced. The study of focus is interesting in part because focus expressions are sensitive to both explicit and implicit context: by examining the relationship between focus expression and discourse structure when the discourse context *is* explicit, we can then use focus as a diagnostic for discourse structure when such context *is not* explicit.

My investigation of Kwak’wala proceeds along such lines. I will show that several of the outstanding mysteries of Kwak’wala grammar involve focus expression, and by making their discourse contexts explicit we can observe how changes in discourse-relevant alternatives cor-

respond to changes in morphosyntactic expression. These discoveries are not, however, simply intended to dissolve mysteries about Kwak’wala grammar; once established, they provide a window into human discourse in general. Kwak’wala focus phenomena, being somewhat different from focus phenomena in other languages, give us an additional angle from which to investigate the nature and structure of linguistic interaction.

1.2 Preview

Kwak’wala (along with related languages in the Wakashan family) is well-known in the linguistic literature for various phenomena: its complex morphophonology, its wealth of “lexical suffixes” and enclitics, and, most importantly for this investigation, its apparent “category neutrality”, that word stems do not obviously fall into syntactic classes like “noun” or “verb”. For example, it is not infrequent that apparent nouns like “water” are sentential predicates without any apparent copular element like “be”, and apparent verbs like “wanted” are frequently used as sentential arguments.

- (1) $\acute{w}apən$ $\text{ʔə}\acute{x}\text{ʔ}\epsilon\acute{x}\text{sd}\acute{s}\acute{w}\acute{\epsilon}\text{ʔ}$
 $\acute{w}ap=n$ $\text{ʔ}\acute{x}\text{-}\text{ʔ}\epsilon\acute{x}\text{sd}\text{-s}\acute{w}=n\acute{\epsilon}\text{ʔ}$
 water=1POSS DO-want-PASS=INVIS
 “I want water.” (Lit: “My [one that is] wanted is-water.”)

Sentences like these led investigators like Boas et al. (1947) to claim that Kwak’wala had no noun/verb distinction, nor any “be” like element. Closer inspection, however, reveals that there are various phenomena in Kwak’wala that are sensitive to a word-class distinction, and moreover that the evidence for acategoriality at the word level is not particularly strong (Chapter 3). Moreover, Kwak’wala does have a “be”-like element, although (as in many languages) it is absent in predicative sentences (Chapter 4), even if the predicate is nominal or adjectival.

These phenomena are tied up closely with the expression of Kwak’wala focus. Kwak’wala focus expression appears to be primarily syntactic, and is indicated by choosing sentences with certain “marked” deviations from the basic Kwak’wala verb-subject-object order (Chapter 6). That is, sentences like (1) with a nominal predicate (here, $\acute{w}ap$) constrain possible focus interpretations in a way that sentences with verbal predicates do not; while a verbal-predicate sentence is compatible with various sets of alternatives (alternatives to the first person, alternatives to wanting, alternatives to water, etc.), a nominal-predicate sentence like (1) is only compatible with contexts in which alternatives to the nominal predicate (here, water) are relevant. This property is not unique to Kwak’wala, but the predicate/argument flexibility of Kwak’wala

allows us to observe the relationship of predication and focus in relative isolation.

Kwak’wala also exhibits interesting focus operators (operators along the lines of “also”, “only”, etc.): these elements comprise a morphosyntactically heterogeneous group with varying constraints on their interpretation. For example, while the Kwak’wala additive operators associate freely – any constituent part of the sentence could be the associated focus – the exclusive operators have limited association, and can only associate with particular constituents. *higa-* associates only with foci in subjects (2a), whereas *ʔo-* associates only with foci in predicates (2b), and *ʔaɫ-* only with foci in temporal adjuncts (2c).

(2) a. *Context: No one else drinks coffee in the morning, so I make a pot just for myself.*

higamən naqa ʔa kafi ʔa gəʔala
 higa=ʔm=n naqa ʔa kafi ʔa gʔ-ala
 only=VER=1 drink ACC coffee ACC early-ONGOING
 “Only I drink coffee in the morning.”

b. *Context: It takes me a long time in the morning to work up an appetite, so I skip breakfast and drink a coffee instead.*

ʔonax^wamən kafi ʔa gəʔala
 ʔwa=nax^wa=ʔm=n kafi-ga ʔa gʔ-ala
 so=ever=VER=1 coffee-consume ACC early-ONGOING
 “I only **drink coffee** in the morning.”

c. *Context: I am a morning coffee drinker, but if I have coffee at any other time of day it disrupts my sleep schedule.*

ʔamax^wamən kafi ʔa gəʔala
 ʔaɫ=nax^wa=ʔm=n kafi-ga ʔa gʔ-ala
 late=ever=VER=1 coffee-consume ACC early-ONGOING
 “I only drink coffee **in the morning**.”

Finally, while special marking to express “WH-” type contrasts (e.g., between two entities, or between two sets) seems to be optional in Kwak’wala, marking *verum* focus and other polarity contrasts (e.g., between an affirmative and a negative) is, with a few exceptions, obligatory, by use of the ubiquitous “discourse particle” =ʔm.

(3) a. dənʔinu^wmeʔe Ben
 dn^w-_iinu^w=ʔm=a=i Ben
 sing-expert=VER=QUES=3DIST Ben
 “Is Ben good at singing?”

- b. ʔəm, dənχʔinuχ^wm̐i.
 ʔm, dnχ_{-h}inuχ^w=ʔm=i
 VER, sing-expert=VER=3DIST
 “Yeah, he is good at singing.”

This marker, which occurs in both questions and answers, reveals that polar alternatives are relevant to a variety of expressions. For example, it provides a morphological reflex that distinguishes between “monopolar” or “bipolar” (Krifka, 2013) questions, and moreover indicates that additive and exclusive sentences both involve polarity contrasts. Polarity-type focus can be observed only indirectly in English and other familiar languages, since polarity contrast is marked indirectly if at all, but Kwak’wala provides relatively straightforward evidence for when polarity contrasts are present.

1.3 Chapter overviews

In Part I, I introduce the nature of this project, and introduce the Kwak’wala language in relatively informal terms; a much more detailed sketch of the language can be found in Appendices A and B.

- In this chapter, I discuss the scope of this project, the notion of “focus” used, and the methods I used to examine it. §1.6 provides an informal introduction to the semantics of focus, for readers unfamiliar with focus and formal semantics. §1.4 presents a few possible reading orders of this thesis, depending on the audience.
- In Chapter 2, I give a brief and informal overview of Kwak’wala grammar, concentrating especially on topics that might be surprising to a reader completely unfamiliar with Kwak’wala or Wakashan languages, or, conversely, familiar with Kwak’wala but unfamiliar with linguistic terminology and analysis.

In Part II, I address some of the claims in Boas et al. (1947) in light of new evidence:

- In Chapter 3, I re-examine a classic claim of the structuralist era – almost certainly the most widely-disseminated claim about the Wakashan languages – that Wakashan languages do not differentiate between classes of nouns, verbs, and adjectives, and have only one open lexical category, the “predicate” (Swadesh, 1938; Boas et al., 1947). I provide evidence from a number of phenomena that Kwak’wala grammar is sensitive to a noun/verb distinction, at the stem level at least, and some evidence that adjectives may be distinct from either. The establishment of a noun/verb/adjective distinction in

Kwak'wala is important for the discussion in Chapter 6, where I examine the effect of predicate choice on focus interpretation.

- In Chapter 4, I re-examine another classic structuralist claim: that Kwak'wala has no equivalent of “be” (Boas et al., 1947). While it is true that verbal, nominal, and adjectival predicates do not take any sort of copular element, I show that Kwak'wala does have a series of copula-like elements that appear when the sentential predicate is not verbal, nominal, or adjectival: in equative sentences, for example, and locative sentences. Once the copular structure is recognized, it can be found in a variety of sentence types. These copular elements appear frequently in focus constructions, but I argue that they are not themselves “focusing” particles.

In Part III, I look at the expression and semantics of focus in Kwak'wala, including the additive, exclusive, and *verum* focus operators.

- In Chapter 5, I present a formal semantic model of focus and discourse congruence that will underlie the discussion and argumentation in later chapters.
- In Chapter 6, I examine the primary structures that express focus in Kwak'wala, the nominal predicate construction and the cleft. I argue that it is not a phonological alignment constraint that conditions these expressions, but that their interpretation follows from principles relating the choice of sentential predicate to the possible focus interpretations of a sentence.
- In Chapter 7, I describe the focus operators of Kwak'wala: those equivalents of “only”, “also”, and “even” that depend on focus semantic values for their interpretation. In this chapter I am especially concerned with “association”, the mechanism (or mechanisms) by which focus operators have access to information about the location or interpretation of the focus.
- In Chapter 8, I investigate *verum* focus, the kind of focus that appears in answers to yes/no questions and polar contrasts, and find that these contexts all contain the “discourse” enclitic =ʔm. I propose that *all* instances of =ʔm are actually markers of a polarity contrast, and that polarity contrasts are more common in discourse than the English stressed auxiliary construction reveals. I argue that the presence of =ʔm in exclusive and additive sentences expresses that these sentences respond to a complex implicit question that involves both WH-type and polar contrasts.

In Appendices A and B, I give a more detailed sketch of Kwak'wala's phonological, morphological, and syntactic systems. There are many aspects of Kwak'wala grammar that remain

unclear, but these appendices at least record some of the assumptions I have been making when proposing underlying forms, segmenting words into morphemes, and making arguments based on differences in form and structure.

1.4 Reading order

Given the range of topics presented here, it is possible that some readers will prefer to read only selected sub-parts of the dissertation.

If you are primarily interested in learning Kwak’wala in order to speak it, but are not as interested in theoretical analyses, most of the chapters begin with relatively informal description and slowly become more theoretical later in the chapter. (This is on purpose, so that it is possible to read as far as possible into a major section or chapter and, when it becomes too theoretical, to simply jump to the next major section or chapter.) Although the overall goal of this work is to examine a particular theoretical concept, I do so by examining several ordinary, everyday aspects of communication:

- How do you say that two individuals (for example, “Darth Vader” and “Luke’s father”) are the same individual (“Darth Vader is Luke’s father”)? How do you say where things are, what they look or sound like, or that they are the same as other things in particular ways? (Chapter 4)
- How do you answer WH (who, what, etc.) questions? (Chapter 6)
- How do you express “too/also” and “only/just”? Is there any way to express “even”? (Chapter 7)
- How do you answer yes/no questions, or draw contrasts between affirmative and negative sentences? (Chapter 8)

These aspects of conversational Kwak’wala have not been described in detail before, so reading at least the earlier parts of each chapter (except for Chapter 5, which is solely theoretical) might be valuable for intermediate or advanced language students, even if you are not interested in the theoretical question of what Kwak’wala communication reveals about human communication in general.

If you are primarily a formal semanticist interested in the semantics of focus within an unfamiliar language, I would recommend reading this introductory chapter (where I explain the direction in which I am investigating “focus”), Chapter 2 (for a crash course on some of

the more notable ways Kwak’wala differs from more familiar languages), and then jumping straight to Part III.

If you are primarily interested in some of the classic questions of cross-linguistic typology, and how Kwak’wala fits into these categories, I would recommend reading Chapter 2 (as an overview of Kwak’wala) and then Part II, where I re-examine some of the classic claims about Kwak’wala, and Chapter 6, which explores where Kwak’wala fits in the typology of focus expression.

If you are primarily a Wakashanist “classicist” (i.e., a scholar of Boas and Sapir), you may be interested in the question of how well Boas’s description of the language lines up with the modern language. Chapters 3 and 4 and Appendices A and B are examinations of “Boasian” questions – primarily questions that concerned Boas – whereas the chapters in Part III address questions outside of Boas’s primary concerns.

1.5 Scope of investigation

The notion of “focus” is among the more nebulous notions in linguistic description, due to the diversity of expressive phenomena described as focus expression, the wide variety of other notions (question semantics, referentiality, topicality, givenness, presupposition, identification, etc.) that are invoked to explain these expressions, and the range of semantic phenomena (e.g. negation, quantifiers, conditionals, conjunction) whose interpretations are influenced by focus expression.

This multiplicity poses a problem to any field investigation of focus in an unfamiliar language, in that it can be difficult to pin down what range of empirical phenomena count as “focus” and therefore what phenomena are within the scope of the investigation. On the other hand, if we define “focus” very narrowly, we may, at the end, come up empty, having tried to investigate a language-specific aspect of focus expression in a language that expresses focus by some other means.

To avoid these extremes, I am concentrating on a very specific semantic notion of focus, but one that is almost certainly universal: in order to calculate their truth and use conditions, some expressions must have, in addition to their ordinary denotation, a denotation in which they are interpreted as if they were variables. For example, some aspects of the interpretation of “ALICE raises chickens” require “Alice” to refer to a particular person, whereas other aspects of interpretation would require that “Alice” be interpreted as varying over a set of referents (say, {Alice, Bernie, Chris, Dylan, etc.}). I term this the “semivariable” property. While not every model implements foci as actual variables (as I do in Chapter 5), every major formal model of focus has some mechanism to achieve a similar duality of interpretation.

We can use “focus semivariables” as grounding for an investigation of focus in an unfamiliar language, since we can be almost certain that these exist cross-linguistically.¹ First, we can investigate semantic and pragmatic phenomena, like question answering and alternative exclusion (“Only Alice raises chickens”), that would require semivariables for their interpretation. Then, we can attempt to address the question, “By what linguistic means do speakers narrow down which elements in a sentence are interpreted semivariably?”

Investigating these means in Kwak’wala requires some substantial detours into some under-described aspects of Kwak’wala morphosyntax (Chapter 3, Chapter 4), which themselves raise a host of questions about the expression of predication and equation, issues of specificity and referentiality, and the cross-linguistic construction of clefts and other special clause types. Although these questions are important for our understanding of Kwak’wala and interesting for what they say about language in general, I will mostly have to concentrate on description and leave some of the typological and theoretical ramifications for future investigation.

1.6 An informal introduction to focus

In this section, I will attempt to introduce the semantics of focus (or rather, some aspects of the semantics of focus that are explored in this investigation) in a relatively informal way. A more formal treatment of focus will follow in Chapter 5.

The term “focus” is used in a wide variety of ways in linguistics; in this investigation, I am concentrating on one particular use of “focus” that has become standard within contemporary formal semantics: roughly, that focus refers to a phenomenon by which a speaker “indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions” (Krifka, 2007, p. 13).

Focus in the above sense is, at its core, a theoretical notion, that is “rooted... in theories of how communication works” (Krifka, 2007, p. 13). Models of focus within formal semantics have largely taken the position that expressions of “focus” do not correspond to a specific *meaning* or *use* (be that contrastiveness, exhaustiveness, uniqueness, question-answering, or some other notion), but rather represent descriptions of a particular kind of abstract semantic object.² Speakers make use of this abstract object to express particular meanings, but the object

¹It is no longer a surprise to find languages that do not use prosodic expressions of focus (e.g. Zerbian, 2006; O’Rourke, 2007; Koch, 2008), and it is at least conceivable that a language could lack any special linguistic expression of focus, but it is difficult to even imagine a language in which expressions could not receive semivariable interpretations; there would be many quite ordinary meanings that such a language would be unable to express.

²Different theories of focus propose different kinds of abstract objects for this:

- a set of alternatives (Rooth, 1985; Beaver and Clark, 2008),
- a set of sets of alternatives (Büring, 2003),

itself does not have any single meaning associated with it.

While the semantic “core” of alternative focus may be rather abstract, there is nonetheless a series of simple empirical patterns that we can use as the basis for an investigation of focus in an unfamiliar language. We can begin an investigation based on the idea that some sentential phenomena are “alternative-sensitive”, such that differences in the context-relevant alternatives correspond to systematic differences in the expression of sentences.

1.6.1 Alternative-sensitivity

For example, we can observe systematic differences in the expression of sentences depending on what question they are answering, or depending on the sentences with which they contrast. In English we can observe that sentential accent placement in answers varies depending on the question that is being answered.

- (4) a. “Who ordered chicken?”
b. “ALICE ordered chicken.”

- (5) a. “What did Alice order?”
b. “Alice ordered CHICKEN.”

When “Alice ordered chicken” answers “Who ordered chicken?”, “Alice” is accented, and when it answers “What did Alice order?”, “chicken” is accented. In particular, we can observe that neither of these expressions of “Alice ordered chicken” serves to answer the opposite question: (4b) does not (in the absence of additional conversational context) serve as an answer to (5a), and (5b) likewise does not serve as an answer to (4a). So English accentuation patterns are “question-sensitive”: not all accentuation patterns are compatible with all questions.

Other phenomena in English are question-sensitive as well. For example, the “cleft” constructions in (6-7) are also question-sensitive:³

-
- a phrase containing a particular kind of distinguished variable (Kratzer, 1991; Wold, 1996; Beck, 2006),
 - a “structured meaning”: a semantic object (such as an ordered pair) representing a sentential partition (Jacobs, 1983; von Stechow, 1991; Krifka, 1991),
 - a kind of underspecified event (Bonomi and Casalegno, 1993), or
 - a hybrid of several of the above (Krifka, 2006).

The informal introduction that I give here would be compatible with any of these theories. I present the examples here in terms of Rooth-style sets of alternatives, but in Chapter 5 I adopt a Kratzer-style formalization.

³In this section, I do not mark the accents in cleft sentences, in order to illustrate the “sensitivities” of the cleft structure itself. These sentences likewise have an accentual pattern, of course, which is likewise question-sensitive.

- (6) a. “Who ordered chicken?”
 b. “It was Alice who ordered chicken.”
- (7) a. “What did Alice order?”
 b. “It was chicken that Alice ordered.”

Again, we can observe that these answers do not serve as answers to the opposite questions: (6b) does not serve as an answer to (7a), and (7b) does not serve as an answer to (6a). So, English clefts are also “question-sensitive” in some way.

Question-answering is not the only phenomenon that displays this kind of pattern. We can also observe this pattern when contrasting two statements.

- (8) a. “Chris ordered chicken.”
 b. “No, ALICE ordered chicken.”
- (9) a. “Alice ordered fish.”
 b. “No, Alice ordered CHICKEN.”

Again, we can observe that (8b) cannot serve as the contrast to (9a), nor can (9b) serve as the contrast to (8a).

We can note the same kinds of sensitivities in various Kwak’wala constructions. For example, the sentences in (10b) and (11b) differ in what the apparent predicate of the sentence is: in (10b), the apparent predicate is *wap* (“[to be] water”), and in (11b) the apparent predicate is *nug^wa* (“[to be] me”). These sentences are used to answer different questions, and neither can answer the others’ question (12-13), suggesting that these sentence structures are, in some way, question-sensitive.

- (10) a. *m̥ac̥aliʔs* ʔəḥʔεḥsdəsəwəʔoʔs
 m̥ac̥al=iʔ=s ʔḥ-ʔεḥsd-sẉ=a=uʔs
 what=3DIST=2POSS DO-want-PASS=INVIS=2POSS
 “What do you want?”
- b. *ẉapən* ʔəḥʔεḥsdəsəẉεʔ
 ẉap=n ʔḥ-ʔεḥsd-sẉ=εʔ
 water=1POSS DO-want-PASS=INVIS
 “I want water.” (Lit: “That wanted by me is water.”)

- (11) a. ʔəng^wida ʔəʔʔeʔsdeʔ ʔa wəp
 ʔng^w=i=da ʔʔ-ʔeʔsd=εʔ ʔa wəp
 who=3DIST=DET DO-want=INVIS ACC water
 “Who wants water?”
- b. nug^waʔəm ʔəʔʔeʔsda ʔa wəp
 nug^wa=ʔm ʔʔ-ʔeʔsda ʔa wəp
 be.1=VER DO-want ACC water
 “I want water.” (Lit: “It’s me who wants water.”)
- (12) a. məcaliʔs ʔəʔʔeʔsdəsəwəʔoʔs
 “What do you want?”
- b. ✗ nug^waʔəm ʔəʔʔeʔsda ʔa wəp
 “I want water.”
- (13) a. ʔəng^wida ʔəʔʔeʔsdeʔ ʔa wəp
 “Who wants water?”
- b. ✗ wəpən ʔəʔʔeʔsdəsəwəʔ
 “I want water.”

In Chapter 6 I will look at a variety of Kwak’wala sentences in an attempt to determine what Kwak’wala sentence patterns are question- and contrast-sensitive, and why.

The examples above all involve contextual restriction – these phenomena restrict the discourse contexts in which their sentences can occur, but do not change the “meaning” of the sentence: “ALICE ordered chicken” and “Alice ordered CHICKEN” are both true in the same set of circumstances. No matter its accentuation, “Alice ordered chicken” is true in situations in which Alice ordered chicken, and false otherwise. However, phenomena like accentuation can even change the situations in which a sentence is true.

- (14) a. “Alice only raises CHICKENS.”
 False in situations where Alice raises both chickens and ducks.
 True in situations where Alice both raises chickens and eats them.
- b. “Alice only RAISES chicken.”
 True in situations where Alice raises both chickens and ducks.
 False in situations where Alice both raises chickens and eats them.

“Only” is only one of many English operators and constructions whose interpretation is

influenced by focus expression (Rooth, 1996; Kadmon, 2001; Beaver and Clark, 2008); others include “just”, “merely”, “also”, “too”, “even”, “always”, “still”, “usually”, “not”, “because”, and many more. These do not all act in a uniform manner (Beaver and Clark, 2003, 2008), but the commonality is that the same phenomena that are “question sensitive” and “contrast sensitive” above are also associated with different interpretations of many semantic operators.

I will examine the Kwak’wala equivalents of some of these operators in Chapter 7.

1.6.2 Explaining these sensitivities

Patterns like those in §1.6.1 have been noticed at least since Paul (1888), but there has been much controversy regarding what aspect of the conversational context, exactly, conditions the difference in expressions. There is some property that “eggs” has in (15b), with respect to the broader context, that “Chris ate ... for breakfast” does not, but what property is this?

- (15) a. “What did Chris eat for breakfast?”
b. “Chris ate EGGS for breakfast.”

There are various proposals for what this difference consists of, falling into two broad categories.

- (16) a. “Eggs” is special because it is new information in the conversational context or new information to the listener, while “Chris ate ... for breakfast” is already present in the discourse or known by the listener (e.g. Chafe, 1976; Clark and Haviland, 1977; Prince, 1981; Schwarzschild, 1999).
b. “Eggs” is special because it represents a point of variance between alternatives – in this case, the possible answers to “What did Chris eat for breakfast?” – while “Chris ate ... for breakfast” does not vary between these alternatives (e.g. Rooth, 1985; Kratzer, 1991).

It is not always straightforward to distinguish these, since the “core” phenomenon in most theories of focus is question-answering, and the information that answers a question is often new to the discourse or the listener, but also represents a point of variance in a set of alternatives. Nonetheless, many authors, including Rochemont (1986), É. Kiss (1998), and Vallduví and Vilkkuna (1998), have argued that these notions should be kept separate and that (some variant of) both of these are empirically necessary: that *both* the distinctions in (16) are distinctions to which human languages are sensitive, and neither can be treated as the absence of the other.

There is, in the linguistic literature, somewhat of a “terminological minefield” (Vallduví and Vilkkuna, 1998, p. 80) regarding these distinctions, with authors using a wide variety of terms

(“given”, “new”, “topic”, “comment”, “theme”, “rheme”, “background”, “focus”) for a variety of similar but not-identical distinctions, and opposing them in a variety of ways. Recently there appears to have emerged a consensus in works that make use of both of the distinctions in (16) (e.g. Krifka, 2007; Selkirk, 2007; Büring, 2007; Féry and Ishihara, 2010; Rochemont, 2012a) to call the phenomenon in (16a) “givenness” and call the phenomenon in (16b) “focus”; I will follow this usage.

In this investigation, I will concentrate primarily on the distinction in (16b). The most notable and interesting Kwak’wala phenomena detailed here seem to be alternative-sensitive, rather than givenness-sensitive, so I have couched my explanations in terms of alternative focus.

1.6.3 Focus as representing alternatives

The idea of “focus” as an expression of semantic alternatives (Rooth, 1985) has been a particularly successful one in formal semantics, as it allows us to account for the question-answering, contrasting, exclusive (“only”, “just”), additive (“also”, “too”), and other uses of focus using a single framework. The unifying idea is that, instead of focus having a single meaning or use, focus expresses the properties of an abstract semantic object – an alternative set or something formally similar – which is used in various semantic calculations.

For example, consider the use of focus in a sentence like (17b), where the speaker means to suggest a contrast between Dylan, who behaved himself, and someone else, who didn’t.

- (17) a. “How was your day? Did the kids give you any trouble?”
b. “Well, DYLAN behaved himself.”

We might say that, in this case, the speaker is using “contrastive focus”, and what contrastive focus does is to suggest that there exists someone else who did *not* behave him- or herself. However, if we then consider the sentence in (18b), what seems to be suggested is that there exists someone else who *did* behave him- or herself.

- (18) a. “I’m glad to hear that Chris behaved himself today.”
b. “DYLAN behaved himself, too.”

Is this a separate sort of focus with a separate meaning? It could be, but as Büring (2007) notes, we should also consider “the alternative: to regard these as different uses of focusing, but not different foci” (p. 80). What these uses of focus have in common is that both refer to certain alternatives to “Dylan behaved himself” – specifically, those alternatives of the form “[someone] behaved him/herself” – but they differ in what they *do* with these alternatives.

1.6.4 Focus semantic values

To back up for a moment, let us consider how a listener manages to calculate the meaning of the sentence in (19).⁴

(19) “I convinced the linguists in Vancouver.”

We presume that the meaning of a complex phrase is built in some way from the meanings of its component parts: that the meanings of “linguists” and “convince” and “Vancouver” and “the” and “in” combine in some way to form more complex phrases like “the linguists in Vancouver”, “convinced the linguists in Vancouver”, and so on up to the level of the entire sentence.

Consider, however, how we manage to calculate the meaning of the sentences in (20).

- (20) a. “I only convinced the LINGUISTS in Vancouver.”
b. “I only convinced the linguists in VANCOUVER.”

These sentences have different meanings; (20a) means that I didn’t convince some other set of people (say, philosophers, businesspeople, chefs, etc.) in Vancouver, whereas (20b) means that I didn’t convince linguists somewhere else (Victoria, Toronto, etc.). This difference is hard to capture if the calculations only have access to the ordinary meaning of the phrase “the linguists in Vancouver”; if that is all the computation had access to, then both sentences in (20) should have the same meaning.

So at some level, the meaning calculation must also have access to meanings like [*other people*] in Vancouver or *linguists in [other places]*. How exactly these meanings are represented, and in what manner the calculation has access to them, is a matter of much debate (e.g. Rooth, 1985; von Stechow, 1991; Krifka, 1991; Kratzer, 1991; Rooth, 1992; Drubig, 1994; Krifka, 2006; Beaver and Clark, 2008), but a common thread that all these models share is the idea that “the LINGUISTS in Vancouver” must have, in some sense of “meaning”, *two* different meanings, its ordinary meaning and another meaning that allows calculations to consider the appropriate alternatives.⁵

The first of these meanings of a word or phrase is called the “ordinary semantic value”, or OSV, while the secondary meaning, the one consisting of the alternatives to the word or phrase, is called the “focus semantic value”, or FSV. A sentence like “Alice raises CHICKENS” would have the OSV in (21a), but its FSV would be something like a *set* of meanings (21b).

⁴This sentence has several distinct interpretations – that the linguists were in Vancouver, or that Vancouver was where the convincing occurred – but here I am only considering the first interpretation, that I convinced a group of people, and that group of people consisted of linguists in Vancouver.

⁵In §1.5 and Chapter 5, I call this the “semivariable” property.

- (21) a. *Alice raises chickens*
- b. $\left. \begin{array}{l} \textit{Alice raises chickens} \\ \textit{Alice raises ducks} \\ \textit{Alice raises goats} \\ \textit{etc.} \end{array} \right\}$

With access to *both* of these values, the meaning calculation can correctly calculate the meanings of sentences like “Alice only raises CHICKENS”, by having it mean something like “None of the meanings in (21b) is true except for the meaning in (21a)”. Meanwhile, the meaning of “Alice also raises CHICKENS” can be calculated as something like “The meaning of (21a) is true, and another meaning in (21b) is true but not equivalent to (21a)”. Without some sort of access to *both* of the values, meanings like these could not be calculated.

1.6.5 Question-answer congruence

The term “congruence” is used to describe the relationship between a question and the appropriate expression of its answer. The question-answer pair in (22) is congruent, because (22b) is an appropriate expression of “Alice raises chickens” in response to this question, but the question-answer pair in (23) is not congruent.⁶

- (22) a. “What does Alice raise?”
 b. “Alice raises CHICKENS.”
- (23) a. “What does Alice raise?”
 b. ✗ “ALICE raises chickens.”

⁶Note that an answer that is incongruent to the question that immediately precedes it might become an appropriate answer given additional prior context. For example, we might “rescue” the incongruent answer in (i) by making it address a more complex context.

- (i) a. “I really want to go see some chickens. Was it Bernie who raises chickens? Or was it Alice? What does Alice raise?”
 b. “ALICE raises chickens.”

We can potentially do this with many examples, making the otherwise-incongruent answer address an earlier question, or address a more complex set of considerations, by embellishing the context. In general, when I observe that a particular answer *A* is incongruent to a question *Q*, I am actually saying that *A* is incongruent to *Q* in the absence of additional context.

In Chapter 5, when I define congruence more rigorously, I will actually be defining congruence in terms of contexts rather than questions – *A* will be congruent or incongruent to a entire context, rather than congruent or incongruent to a question – and so when I say that an answer *A* is congruent or incongruent to a question *Q*, this is actually an informal shorthand way of saying that *A* is congruent or incongruent to a context *C* that only contains *Q*.

Once we have “focus semantic values” like those in (21b), modeling this relationship becomes more straightforward.

Alternative sets like those in (21b) were already familiar in formal semantics, as the semantic object to which questions refer. Following Hamblin (1958; 1973), many semanticists have treated questions as if they referred to the set of their possible answers, so that the meaning of “What does Alice raise?” would be a set something like that in (24).

$$(24) \quad \left\{ \begin{array}{l} \textit{Alice raises chickens} \\ \textit{Alice raises ducks} \\ \textit{Alice raises goats} \\ \textit{etc.} \end{array} \right\}$$

Since “Alice raises CHICKENS” is a congruent answer for “What does Alice raise?”, we can model this congruence as a relationship between the sets in (24) and (21b). If each meaning in the question’s alternative set is also in the answer’s alternative set, then the question and answer are congruent. Since this is indeed the case for (24) and (21b), the corresponding question-answer pair is predicted to be congruent.

If there are any meanings in the question’s alternative set that are *not* in the answer’s alternative set, however, the question and answer will *not* be congruent. Consider the incongruent question-answer pair in (23). The question in (23a) refers to the set in (25a), but the FSV of (23b) is the set in (25b).

$$(25) \quad \begin{array}{l} \text{a.} \\ \text{b.} \end{array} \quad \left\{ \begin{array}{l} \textit{Alice raises chickens} \\ \textit{Alice raises ducks} \\ \textit{Alice raises goats} \\ \textit{etc.} \end{array} \right\}$$

$$\left\{ \begin{array}{l} \textit{Alice raises chickens} \\ \textit{Bernie raises chickens} \\ \textit{Chris raises chickens} \\ \textit{etc.} \end{array} \right\}$$

The set in (25a) contains meanings that the set in (25b) *does not* contain, so as a result this question and answer are *not* congruent.

So in summary, associating particular expressions of phrases (like “ALICE raises chickens” or “Alice raises CHICKENS”) with particular “alternative sets” gives us a way to account for several interesting phenomena in language, including the fact that different expressions answer different questions, and that different expressions cause different meanings in the presence of

words like “only” and “also”.

It also helps resolve a mystery: why is the same accentual pattern associated with so many different meanings: contrastive meanings, additive meanings, exclusive meanings, etc.? The answer is that English speakers can use accentual patterns not to express a particular meaning, but to communicate *which* alternatives they consider relevant, and this information is used directly or indirectly in a variety of meaning-related calculations.

1.6.6 Why investigate focus?

Focus, in the “alternative” sense used here, is worth investigating for several reasons.

For one, although “focus” is alternative-sensitivity, not all of these alternatives are made clear in the rest of the discourse. Focus often refers to unspoken alternatives, unspoken questions, unspoken contrasts; focus is not a purely mechanical calculation based on what has already been said, but is often the way that speakers *express* what alternatives they consider relevant. That is, focus is not purely *reactive*; it is often *communicative*.

For example, answers do not always have the exact “shape” that we would predict from §1.6.5; sometimes speakers express answers as if they respond to questions that are slightly different than the ones actually asked.

- (26) a. “How are the children?”
b. “Well, DYLAN is behaving himself.”

The speaker in (26b) has chosen the focus expression that one would expect if the question had been “Which children are behaving?”, and in doing so calls to attention other possible answers (say, “Chris is behaving himself”) that they have *not* chosen. Or consider the difference in (27); even if the speaker is not directly responding to any question, focus expressions allow them to indicate which questions they consider the important ones.

- (27) a. “I was glad that it was you who called my mother.”
b. “I was glad that it was my mother that you called.”

In (27) speaker makes clear what question they considered important: “Who called my mother?” or “Who did you call?” The speaker does not need to express this question – they do not need to say “I was concerned about [who was going to call my mother/who you were going to call], and...”, because the expression in (27) makes this clear.

In other words, focus is one of the ways speakers *reveal* what is otherwise left unspoken, and if we do not know how a language expresses focus, these things remain unspoken.

Another reason that focus is interesting to investigate is that it appears likely that all lan-

languages do *something* to express focus, but not all of them use English-like accentuation (Zerbian, 2006; O’Rourke, 2007; Koch, 2008). Some change the order of words in the sentence, or use special constructions like clefts, or add special endings to words; in many languages focus is one of the *most* important things to consider when deciding how to structure your sentences (É. Kiss, 1995).

So, when we do not know how a language expresses focus, there is potentially a lot about that language that we do not know: why some sentences are structured in the way they are, what certain morphemes mean, and sometimes, why one expression of a thought is chosen over another possible expression.

1.7 Focus and focus marking

In the previous section, I avoided the use of the term “focus” to refer to a particular element of the sentence (say, “Alice” in “ALICE likes chickens”), in part to avoid making a conflation between the idea of an element being a “focus” in the semantic/pragmatic sense from its being “focused” – that is, *marked* as a focus in the phonology, morphology, or syntax.

In this investigation, being a “focus” simply means being an element that is treated by the semantics as a point of variance between a set of alternatives, whether or not speakers have done anything to mark it as such. For example, if the alternatives under consideration are {Bob likes cats, Bob likes dogs, Bob likes rabbits} – for example, if the question under discussion had been “What animal does Bob like?” – then I consider “dogs” in an utterance meaning “Bob likes dogs” to be a “focus” in my sense, even if the language does not use accentual emphasis or a special construction to single out “dogs”.

In other words, “focus” here is a semantic notion, discovered through noting what questions an utterance answers, what it contrasts with, and what entailments and presuppositions it has; we can then note how particular sentential expressions are compatible or incompatible with particular possibilities for focus interpretation. From this point of view, there is nothing *a priori* impossible about an “unmarked focus”; some sentential expressions in some languages might not give any information about which elements are foci, with the result that sentence would be compatible with any contextual alternatives.

Since English intonation marks focus with some regularity and precision, in much of the literature on English there is not a clear distinction between being-a-focus and being-focused. Partee (1999) makes this clear when considering the possibility, in English, of foci without phonological marking: “The notion of inaudible foci at best would force the recognition of a multiplicity of different notions of ‘focus’ and at worst might lead to a fundamentally incoherent notion of focus” (Partee, 1999, p. 216). This concern is understandable if “focus” refers

to a particular sort of form-meaning correspondence: how can we discuss a correspondence phenomenon in the absence of that correspondence?

In investigating a comparatively unknown language, however, a conflation between the semantic notion of focus and its implementation in the phonology (or otherwise) poses an empirical problem, in that it would presuppose a particular sort of result. Consider the following Kwak’wala examples, in which either (28b) or (28c) can serve to answer the question in (28a).

- (28) a. ʔəng^wuǰda q̣^wayalaǰ
 ʔng^w=uǰ=da q̣^was-(k)_ha-la=q
 who=3_{MED}=DET cry-sound-ONGOING=VIS
 “Who is crying?”
- b. q̣^wasuǰda ẉaciǰ
 q̣^was=uǰ=da ẉas-_hi=q
 cry=3_{MED}=DET **dog**-NMZ=VIS
 “A **dog** is crying.”
- c. ẉaciyuǰda q̣^wayalaǰ
 ẉas-_hi=uǰ=da q̣^was-(k)_ha-la=q
 dog-NMZ=3_{MED}=DET cry-sound-ONGOING=VIS
 “A **dog** is crying.”

Both of the sentences in (28b) and (28c) are possible answers to the question, but only in (28c) is the speaker using a dedicated focusing construction, in this case a nominal predicate construction (§6.5.2). Nonetheless, I consider both instances of *ẉaci* to be foci, for two reasons. For one, if we use question-answer congruence as a diagnostic for the location of focus (in the semantic sense), which is nearly a requirement when investigating focus in an unfamiliar language, then the evidence for *ẉaci* being a focus is just as strong for both sentences. Secondly, if we use syntactic realization as a necessary condition for semantic focus – if we only consider (28c) to have a focus – then arguments for a syntax/semantics mapping become circular, and many claims that we might want to make about focus would become unfalsifiable. This is true for any kind of focus marking – if we were to use having-a-pitch-accent as a necessary condition for being-a-focus, then “All foci are marked with pitch accents” ceases to be an empirical claim; there would not be any kind of evidence to falsify it.⁷

We must, therefore, work from one direction or another:

1. by identifying a sort of marking as “focusing”, and then investigating the semantic and

⁷I return to this argument in §6.3 and §6.4.

pragmatic effects of that marking.

2. by identifying a semantic or pragmatic notion as “focus”, and investigating what kind of marking (if any) occurs to mark it.

In this investigation, I primarily take the second approach, treating as “foci” the minimal elements in an utterance that would have to have a secondary, variable interpretation in order to calculate the sentence’s truth- and use-conditions⁸ – the points of variation between possible answers to a question, the points of variation between two contrasting sentences, the points of variation between those alternatives included and excluded by an exclusive operator – and attempt to determine what elements of sentential expression correspond to these foci.

Once I have isolated several constructions of interest, however, there is by necessity some degree of the first approach, because the elements found may or may not be “focusing” in all their uses. For example, many focus constructions begin with the elements *yu* and *he*, but I argue in Chapter 4 that these are not themselves “focus particles”. On the other hand, while many instances of the “discourse” particle $=\lambda m$ are not obviously focus-related, I attempt an account in Chapter 8 in which $=\lambda m$ nonetheless indicates focus of a particular sort.

Regarding focus “marking”, it is also important to consider that most forms of focus expression do not uniquely narrow down which elements are foci, such that one could, in all cases, identify the relevant alternative context from that marking alone.

- (29) a. “ALICE raises ducks.”
= Alice_F raises ducks [... not anyone else]
- b. “Alice raises DUCKS.”
= Alice raises ducks_F [... not chickens]
= Alice [raises ducks]_F [... rather than grows corn]
= [Alice raises ducks]_F [... and that’s all that happens]
- (30) a. “It was the professor from Canada that found the treasure.”
= It was the professor_F from Canada that found the treasure
[... not the student from Canada]
= It was the professor from Canada_F that found the treasure
[... not the professor from Germany]
= It was the professor_F from Canada_F that found the treasure
[... not the student from Germany]
= It was the professor from_F Canada that found the treasure

⁸Note that this formulation treats contrastive topic as a kind of focus; I will return to this point in §5.5.

[... not the professor currently in Canada]
= It was the [professor from Canada]_F that found the treasure
[... not a truffle pig]

b. “It was the treasure that the professor from Canada found.”
= It was the treasure_F that the professor from Canada found.
[... not a manuscript]

(31) a. “Only young boys smash pumpkins.”
= Only young_F boys smash pumpkins [... not older boys]
= Only young boys_F smash pumpkins [... not young girls]
= Only [young boys]_F smash pumpkins [... and nobody else does]

b. “Young boys only smash pumpkins.”
= Young boys only smash_F pumpkins [... they don’t carve them]
= Young boys only smash pumpkins_F [... rather than eggs]
= Young boys only [smash pumpkins]_F [... and don’t do anything else]

c. “Young boys smash only pumpkins.”
= Young boys smash only pumpkins_F [... rather than eggs]

Focus accentuation (29), clefting (30), and “only” placement (31) are each compatible with a range of focus interpretations; they sometimes uniquely identify which sentential elements are foci (29a, 30b, 31c), but not always (29b, 30a, 31a, 31b).

For this reason, in the chapters on focus expression (Chapters 6 through 8) I will not refer frequently to focus “marking”, or a constituent being “focused”, except as an informal kind of terminological shorthand. I will instead talk mostly in terms of the “restriction of focus interpretation”: does a particular kind of expression allow the listener to narrow down what focus interpretations are possible for the sentence?

1.8 Methodology

When not accompanied by a textual reference, all Kwak’wala-language data in this work come from my fieldwork with eight Kwakwəkəwakw elders in Vancouver, Victoria, and Port Hardy, British Columbia.

The investigation of focus in an unfamiliar language poses some difficulties for formal semantic investigation. Much of the semantic investigation of focus in English, German, Hungarian and other languages uses the intuitive method; which set of alternatives are relevant to a

particular utterance, and whether it is felicitous in a particular discourse context, are available to the speaker-investigator via introspection. These kinds of judgments can be difficult to draw out of another person.

In this investigation, I used a variety of methods for eliciting focus data and judgments, including contextual judgment tasks, contextual “translation” elicitation, various visual elicitation tasks, and game-like activities. While each of these methods has some drawbacks, when they yield results consistent with each other, it is very unlikely that the results are entirely task effects. This data is further augmented by volunteered and spontaneous examples, as well as examples from existing texts (e.g. Boas and Hunt, 1905).

1.8.1 Contextual judgments

To determine the semantics of a particular morpheme or construction, I use the contextual judgment method detailed in Matthewson (2004). In this method, the elicitor sets up a context (sometimes imaginary, sometimes represented with pictures and props) and asks whether a constructed sentence would be true (or, for phenomena that do not have truth-conditional effects, appropriate) in that situation.

This method gave robust results for those phenomena where focus had effects on the truth conditions of the sentence; judgments about “only”-type operators were entirely consistent across speakers and sessions.

However, when the effects of focus were only “use-conditional”, most speakers were reluctant to “reject” sentences for focus reasons alone. That is, so long as sentences were well-formed, pronounced correctly, and true of the situation, many speakers would accept them regardless of considerations like what question had been specified in the context. Only a few speakers would regularly reject sentences for “answering a different question” than was asked.⁹

⁹I would emphasize, however, that speakers who do not reject sentences in these conditions are not necessarily “incorrect” or “misunderstanding the task”. Focus, in the view I laid out in §1.6, is an expressive phenomenon, expressing aspects of the discourse that are often left implicit. More specifically, focus expresses that discourse-relevant alternatives differ with respect to a particular element; when someone “focuses” an element, they are communicating that they consider alternatives to this element relevant to the conversation. *Rejecting* focus marking means rejecting that alternatives of a particular form are relevant to a context, which is a very different kind of rejection than rejecting a sentence for being false in a context. Speakers *sometimes* do this, but not always.

The purely “pragmatic” focus judgment tasks presented in Chapters 3, 6, and 7 are those from sessions in which speakers were being “tougher” about contextual felicity, rather than accepting anything produced. I do not consider indiscriminating acceptance incorrect, but such judgments simply do not provide much information about Kwak’wala pragmatics.

1.8.2 Contextual elicitation

Contextual judgment tasks – indeed, many kinds of tasks – rest on a base of elicited content: the task wherein the investigator uses an intermediate language (in this case English) to ask something along the lines of “How do you say *X*?” or “What does *Y* mean?” Field investigations do not always acknowledge the extent to which elicited translation tasks underlie the empirical program, but I think it is worth highlighting, here.

While there are significant caveats associated with elicited translations, there are also some upsides worth noting. Eliciting pragmatic judgments is itself a pragmatically unusual situation, but *translation* is a comparatively familiar and natural act; these speakers have been bilingual since childhood, and some have years or decades of experience as language experts, translators, and researchers in their own right. Their translations from English utterances were very consistent in how they expressed distinctions, and used morphology, about which it proved very difficult to get judgments.

Since my primary goal was to examine the effects of discourse context on expression, translated utterances in isolation would be of limited use; it would not be clear what questions were under discussion, what alternatives were possible, etc.¹⁰ While these factors are never completely known – the speaker might or might not be keeping them in mind when translating – the more we can be completely explicit about questions, alternatives, etc. the less likely it is that the speaker is imagining a different discourse situation. So, translation tasks were performed in contexts as carefully specified as those in §1.8.1; the utterances to be translated were treated as utterances in a particular situation, by a particular participant, rather than as a sequence of words in isolation.

The most important downside of translation-based elicitation, of course, is the influence of the intermediate language. When a set of contextual translations shows sensitivity to a semantic or pragmatic distinction that English does *not* indicate, or indicates only very indirectly, or indicates by entirely different means, this is potentially good evidence that this distinction is a genuinely Kwak’wala phenomenon. However, when a set of contextual translations indicates a semantic or pragmatic distinction exactly as English does, then this does not necessarily constitute evidence that Kwak’wala makes this distinction or expresses it in the same way, since the speaker may be translating too literally from the English.

¹⁰For example, if you ask speakers to translate sentences with English universal quantification, the “discourse” particle =*ʔm* seems to occur more or less at random. I think this is in part because, without pinning down the question under discussion, the speaker can imagine various questions under discussion that “All the boys ran” answers, some of which condition the presence of =*ʔm* and some of which do not.

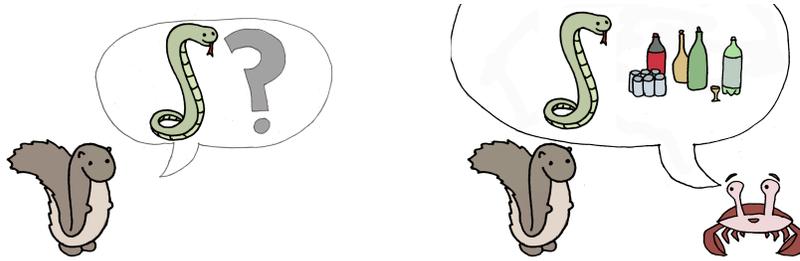


Figure 1.1: Patient-focus picture pair: “What did Snake bring?” “Snake brought the drinks.”

1.8.3 Storyboarding

An intermediate step between translation and more freeform visual elicitation is *storyboarding* (Burton and Matthewson, 2015), the presentation of a comic-like “storyboard” for the speaker to interpret. In most cases, I take the speaker through the story a single time – occasionally twice, on speaker request – and explain the story in English, and then record the speaker’s interpretation in Kwak’wala. Also, some speakers requested clarifications on particular pictures during their interpretations, which I also provided in English. So these storyboards should not be taken as completely naturalistic Kwak’wala, independent of all English language influence, but whatever influence there may be would be less direct than it would be in a pure sentence-by-sentence translation task.

The use I have made of these storyboards is often different than their original intention. For example, the “Feeding Fluffy” storyboard (TFS Working Group, 2012) was intended to answer a specific question about epistemic modal interpretation, whereas for the most part I have used the results to illustrate particular morphological and pragmatic phenomena that the storyboard had not been specifically designed to target.

One particular set of storyboards – those I call “scramble storyboards” – need some further introduction. These storyboards (Littell, 2010a,b) each involve two parallel storyboards, depicting simple question-and-answer dialogues. However, in each pair, the picture describing the *answer* is shared, whereas the picture describing the *question* is not shared; this is illustrated in Figs. 1.1 and 1.2.

These storyboards are offered to the same speaker (although always with at least an hour break in between, and usually in a different elicitation session), with the intention of seeing what differences (if any) the effect of the question has on the expression of the answer.

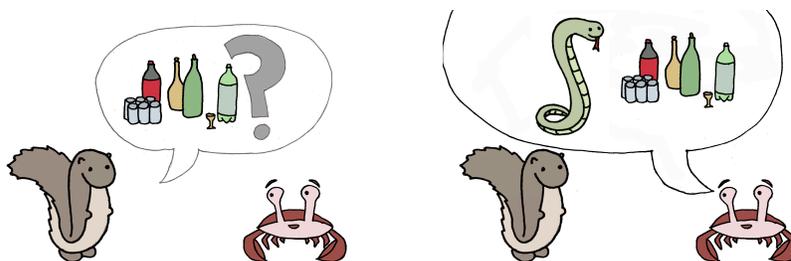


Figure 1.2: Agent-focus picture pair: “Who brought the drinks?” “Snake brought the drinks.”

1.8.4 Card games and other games

One activity that proved a useful way of getting question-answer pairs was to play simple card games and discuss the state of play. An elicitor acts as the questioner, and does not play, but asks the speaker questions about the state of play (“What did Masaki draw?”, “What happened to it?”, etc.).

One benefit of this is that the speaker tends to pay close attention to the context – they have to, to play the game – thus increasing the confidence that they have the same context in mind as the elicitor. Card games also make clear the range of possible alternatives (whether that be alternatives to number, alternatives to color, alternatives to player, etc.) that might be discourse-relevant.

On the downside, however, in most cases we played these games in groups of several learners and a single speaker, meaning that prompts were given by a non-fluent speaker, and the answers were directed to non-fluent speakers.

1.8.5 Find-the-difference

The value of storyboarded dialogues, like those in §1.8.3, were that question-answer pairs were *self-prompted*: the speaker provides their own question prompts, and therefore the potential interference of a non-fluent questioner is avoided.

The most effective self-prompting activity that I found was to provide speakers with “find-the-difference” tasks: showing two pictures that differ in one or more details, and then letting the speaker describe the differences they find (e.g., “In this picture the cat is chasing the rabbit, but in this picture the snake is chasing the rabbit”).

Tasks like these allow the speaker to respond to a discourse context that they themselves set up.

I also set up this activity for pairs of speakers, in which each speaker was given one of the

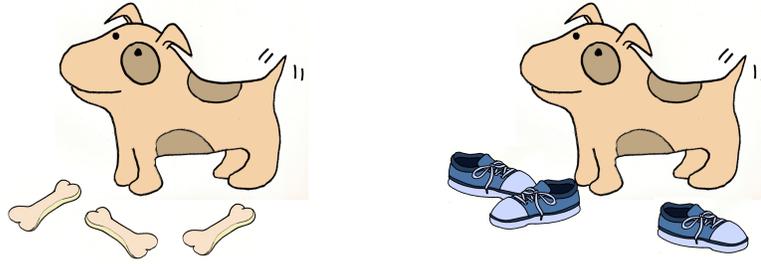


Figure 1.3: Simple “Find-the-difference” picture activity

pictures but could not see the others, and the speakers were encouraged to discuss what they found in order to determine what details differed between the pictures.¹¹

One interesting benefit of using these “find-the-difference” activities with multiple speakers is to be able to observe the expression of factual disagreements without making one speaker “wrong”; both speakers are, of course, “correct” about what is in their own picture.

1.8.6 Spontaneous speech

Insofar as possible, I also tried to take into account spontaneous speech, not as my main data source – one cannot be certain, as a beginner in the language, that one has really understood the real discourse context – but as potential confirmation or falsification of the generalizations made on the basis of less-spontaneous data.

In a few cases spontaneous speech proved an important falsifier. For example, the deeper investigation of $=?m$ in Chapter 8 was spurred largely by a few spontaneous utterances that violated the simplistic hypotheses (e.g., that $=?m$ expressed the same thing as the English stressed auxiliary construction) that less-spontaneous tasks had suggested to me.

1.8.7 Texts

As a further source of confirmation or falsification, I have tried to find textual evidence of the major phenomena investigated here, both in classical (Boas and Hunt, 1905) and modern (Dick and Shaughnessy, 1977; Goodfellow et al., 1991; Cranmer and Janzen, 2014) sources. While not every phenomenon encountered in this investigation is frequent in texts, and it can be difficult, in a monologue, to know what questions the narrator might be addressing or what alternatives they might have in mind, some of the phenomena investigated here are well-attested

¹¹This proved a difficult activity for some pairs, so in these cases I removed the barrier and let them see each other’s pictures as well.

textually. Equative sentences (Chapter 4), for example, are reasonably common in texts, although examples with two full arguments are not especially common. Additive and exclusive focus operators (Chapter 6) are textually quite frequent, and the alternatives that they invoke are often expressed explicitly (e.g. “He didn’t do *X*; he only did *Y*.”). This provides an important confirmation that some of the major phenomena found in this investigation are not just methodological artifacts, and, for that matter, not recent innovations.

There is one important caveat, however, in that the semantic details of the English *translations* that accompany Kwak’wala texts do not always match the semantic details of the original Kwak’wala sentences. This is particularly important when we consider “only”. Kwak’wala indicates the positional possibilities of exclusive foci in the sentence by choosing one of three exclusive operators; English indicates this with the position of the word “only” within the sentence. However, while sentences with a Kwak’wala exclusive operator usually correspond to English sentences with “only” or sometimes “just”, the position of the operator in English translations does not always indicate the same possibilities as the Kwak’wala operator choice, and sometimes indicates incompatible possibilities. (That is, the writer of the English story probably recognized an “only” meaning in the Kwak’wala sentence, and tried to find a place where “only” fit naturally into the English sentence; this usually works fine but occasionally results in an inaccurate or misleading rendering of the Kwak’wala original.)

1.9 Summary

Investigating focus in an unfamiliar language poses difficulties, due in part to uncertainty (both with respect to English and cross-linguistically) over what phenomena count as being “focus marking” or being “focus-sensitive”. In this investigation I take a semantic definition of focus – focus is a property of words or phrases such that they can either have their ordinary semantic interpretation or a variable interpretation. By investigating communicative phenomena that rely on this property, like question answering, contrast, exclusion, and addition, we can observe by what means speakers narrow down which words or phrases in the utterance have this property.

Chapter 2

Kwak’wala overview

2.1 Introduction

In this chapter, I give a preliminary and informal introduction to Kwak’wala, attempting to present an overview of some of the key phenomena in Kwak’wala grammar without relying too much on specialist terminology or argumentation.

I revisit each of these topics in much more detail in Appendices A and B.

2.1.1 The Kwak’wala language

Kwak’wala is a Northern Wakashan language of British Columbia, Canada, spoken on the northern part of Vancouver Island, the adjacent mainland, and various islands in between. Kwak’wala has been under significant pressure from English for over a century, and currently there are only about 150 first-language speakers remaining, most in their 70s or older (First Peoples’ Cultural Council, 2014), although significant revitalization efforts seek to reverse this situation and produce new generations of speakers.

There is no completely unambiguous and accepted term to refer to the language as a whole. Early works on the language, such as the extensive texts and descriptions from Franz Boas and George Hunt, referred to it as “Kwakiutl” (pronounced *kʷagʷuʔl*), the name of the tribe at Fort Rupert. By the 1970s, the term for the language in the linguistic literature had shifted to “Kwak’wala” (e.g. Grubb, 1977), which is the term in the language itself for the dialect spoken by the Kwakiutl. (To be precise, *kʷakʷala* means “to sound like a Kwakiutl”, and is a verb rather than a proper noun; all language designations in the language are verbs.)

This term is not used by all speakers, however, since the dialect in question is spoken by many people who are not themselves Kwakiutl, and in any case the term does not encompass

the various other dialects, including Gwat'sala (the dialect of the Gwa'sala of Smith Inlet), 'Nak'wala (the dialect of the 'Nakwaxda'xw of Blunden Harbor, very similar to Gwat'sala), Gut'sala (the dialect of the Gusgimukw of the Quatsino area), and Liq'wala (the dialect of the Ligwilda'xw of the Campbell River area, which can also be considered a separate language altogether).¹ Therefore, some speakers, when describing their own speech, use the more general verb *bak'wəmkála* instead (“to sound like a *Bak'wəm*, roughly, a Northwest Coast First Nations person”). Some people prefer this term for the language as a whole, since Kwak'wala refers more narrowly to a specific dialect of the language; others feel that *Bak'wəmkála* might be too broad a name, since this word could also encompass how other Northwest Coast language speakers speak. (That is, to speak Heiltsuk or Nuuchahnulth, or even some languages unrelated to Kwak'wala, could be to *bak'wəmkála* also.) The term for all speakers of Kwak'wala considered together (in the sense of the language, not the sense of the specific dialect) is the Kwakwəkəwakw (“Kwak'wala speaking people”).

For the purposes of this work, I will use the term Kwak'wala, because that remains the most common term in the current linguistic literature, and also because the Kwak'wala dialect itself is the specific dialect portrayed here.

2.1.2 Sources

Where not otherwise indicated, my data comes from elicitation from first-language Kwak'wala speakers, as detailed in §1.8.

The standard references for the Kwak'wala language are Boas (1911) and especially Boas et al. (1947), the posthumous compilation and publication of his detailed notes; these works are based on the extensive collections of vocabulary, songs, narratives, and myths (including Boas, 1893, 1896; Boas and Hunt, 1905; Boas, 1910) that Franz Boas and his assistant George Hunt collected, particularly during the Jesup North Pacific Expedition. Boas et al. (1947) is the standard reference, although Boas (1911) is a better entry point for beginners, being clearer and more concise. I also make some use of Boas (1900), which represents an earlier stage in Boas's growing understanding of the language; this is valuable to me in particular because it contains some insightful informal observations that do not entirely survive in his more mature work.

For the same reason, I make use of the practical grammar and Bible translations from the missionary Rev. Alfred J. Hall (1888a; 1888b; 1882; 1897). All of Hall's materials must be used with caution, since his understanding of the sound system and structure of the language was rudimentary; as Boas (1900) critiqued, “the author has not succeeded in elucidating [the

¹These do not exhaust the speech varieties of the Kwakwəkəwakw nations, but they are the varieties that my consultants reported when asked what words describe different speech varieties.

language’s] structural peculiarities” (p. 708). Nonetheless, these materials remain valuable, in particular his grammar, originally intended as his own notes for whoever succeeded him. Since Hall is concerned with ordinary conversational usage, he records things like what form of a sentence would be used in response to particular questions; this is a topic that is somewhat outside of Boas’s core concerns.²

Hall’s translations should be treated with even greater caution; while it is clear that Hall had significant assistance from fluent speakers, no particular sentence can necessarily be trusted to have come from a fluent speaker. Nonetheless, these translations have some value. For example, the form of “only” that I frequently encounter, *higa*, appears to be absent from Boas’s texts (in its place is a term *lixa* that functions similarly) but is frequent in Hall’s translations, confirming that *higa* meaning “only” was in use even in the 1880s. On the other hand, the different words Hall uses for “only” do not quite follow the patterns we can observe in Boas’s texts, or observe in modern speech; my sense is that Hall had a rough idea of when to use each, but his usages should not necessarily be taken as genuine Kwak’wala data.

For the analysis of the sound system – that is, for the **phonology** – of Kwak’wala, I rely on more recent work such as Grubb (1977) and Bach (1975); in particular I adopt the idea that there are six basic vowels (*i*, *e*, *ə*, *a*, *o*, and *u*), some subset of which are probably derived from the others, and the basic word stress generalization (that the leftmost “heavy” syllable is stressed, but stress defaults to the final syllable when there are no heavy syllables). My assumptions are most similar (although not identical) to those made by Lincoln and Rath (1980). For the analysis of structure – that is, for the **morphology** (the formation of words from meaningful parts) and **syntax** (the formation of sentences from words) – I follow the general tradition starting from Levine (1980, 1981, 1984) and Anderson (1984) and continued in more recent work such as Chung (2007), Sardinha (2013), and Sherer (2014). In examining the phonology and morphology of Kwak’wala, I made significant use of the FirstVoices (2009) word list, based on the Grubb (1977) dictionary.

For other sources of data, I use a collection of stories and texts from Ruby Dawson Cranmer (Cranmer and Janzen, 2014), a collection of short texts and songs from *ʔənica* Mary Dick (Dick and Shaughnessy, 1977), a children’s book *Gəngənanəmasa Kʷakʷəkəwəkʷ* (“Children of the Kwakwaka’wakw”) (Goodfellow et al., 1991)³, and the “Learning Kwak’wala” textbook series (Powell et al., 1981a,b,c, etc.).

²While Hall does not provide enough such data to reconstruct a system from it, the question-answer pairs that he does give show the same patterns that speakers use today. This is helpful in confirming that the patterns we can observe today are not just recent innovations.

³*Gəngənanəmasa Kʷakʷəkəwəkʷ* is a Kwak’wala-only book, so I consulted with an elder to ensure I was not misinterpreting or mistranslating the sentences I reproduce here.

2.1.3 Orthography

Kwak'wala has been written down in many ways; since Kwak'wala has so many more sounds than the 26 Roman letters can express, and since it is still not entirely certain which sound distinctions need to be expressed (for example, do we need to distinguish two different kinds of *e*?), there has naturally been disagreement as to which conventions are best when using Roman letters to express the sounds of Kwak'wala. These sets of conventions, called **orthographies**, are just writing conventions, rather than languages in themselves: we can express the same Kwak'wala sentence in various orthographies, or use the same orthography for Kwak'wala and for a different language (say, Haisla or Heiltsuk).

There are six main orthographies in which Kwak'wala has been written.⁴

- **NAPA (UVic)** was the orthography taught in Prof. Thom Hess's courses at the University of Victoria, and used by his students.
- **NAPA (UBC)**, which varies from NAPA (UVic) only in the use of *ɔ* and *χ* for *ǰ* and *ǰ̣*, was taught in Prof. Patricia Shaw's courses at the University of British Columbia, and used by her students.
- **U'mista** is the orthography promoted by the U'mista Cultural Center in Alert Bay, and has become the de facto standard for most communities and speakers.
- **Grubb**, on which U'mista is based, is the orthography used in the most widely distributed dictionary (Grubb, 1977).
- The orthography I term **Boas 1900** represents the orthographic conventions from Boas's earliest works, including Boas (1900).
- The orthography I term **Boas 1947** represents the orthographic conventions from Boas's later works, including Boas et al. (1947).

The first four of these are nearly equivalent, and text can be converted between them with little loss.⁵ The only substantial difference is that NAPA orthographies can distinguish glottal stop + resonant sequences from glottalized resonants (*ʔm* vs. *ṃ*) whereas U'mista represents both with *'m*.

⁴This does not include the orthographies used by Hall (1888a; 1888b; 1882; 1897), since Hall did not manage to hear many important distinctions that are crucial in producing readable Kwak'wala.

⁵It should also be noted that conventions from one orthography are sometimes seen in material written intended to be in another orthography. For example, Grubb-style conventions (like *e* for schwa and *ʔ* for the glottal stop) are sometimes used in material that is intended to be in NAPA or U'mista orthographies, probably because authors are using the Grubb (1977) dictionary but neglect to convert these idiosyncrasies. Likewise, we can sometimes find U'mista conventions in NAPA-style material, like the use of *ʔ*+resonant to represent glottalized resonants, probably due to direct conversion from the FirstVoices (2009) word list.

IPA	NAPA (UVic)	NAPA (UBC)	U'mista	Grubb	Boas 1900	Boas 1947
p	p	p	p	p	p	p
p'	p̣	p̣	p̣	p'	p!	p!
b	b	b	b	b	b	b
t	t	t	t	t	t	t
t'	ṭ	ṭ	ṭ	t'	t!	t!
d	d	d	d	d	d	d
t's	c	c	ts	ts	ts	ts
ts	c̣	c̣	t's	ts'	ts!	ts!
dz	dʒ	dʒ	dz	dz	dz	dz
tʃ	ʃ	ʃ	tʃ	tʃ	ʌ	ʌ
t'ʃ	ʃ̣	ʃ̣	t'ʃ	tʃ'	ʌ!	ʌ!
dʃ	ʃ	ʃ	dʃ	dʃ	ɾ	ɾ
kʲ	k	k	k	k	k·	k·
k'ʲ	ḳ	ḳ	ḳ	k'	k·!	k·!
gʲ	g	g	g	g	g	g
kʷ	kʷ	kʷ	kw	kw	kw	k ^u , kw
k'ʷ	ḳʷ	ḳʷ	k'w	kw'	k!w	k! ^u , k!w
gʷ	gʷ	gʷ	gw	gw	gw	g ^u , gw
q	q	q	ḱ	ḱ	q	q
q'	q̣	q̣	ḳ́	ḱ'	q!	q!
ɟ	ɟ	ɟ	ḡ	ḡ	ɟ	ɟ
qʷ	qʷ	qʷ	ḱw	ḱw		q ^u , qw
q'ʷ	q̣ʷ	q̣ʷ	ḱ'w	ḱw'		q! ^u , q!w
ɟʷ	ɟʷ	ɟʷ	ḡw	ḡw		ɟ ^u , ḡw
ʔ	ʔ	ʔ	ʔ	ʔ	ε	ε
s	s	s	s	s	s	s
ʃ	ʃ	ʃ	ʃ	lh	ʃ	ʃ
xʲ	x	x	x	x	x·	x·
xʷ	xʷ	xʷ	xw	xw		x ^u , xw
χ	χ̣	χ	χ̣	χ̣	X	x
χʷ	χ̣ʷ	χʷ	χ̣w	χ̣w		x ^u , xw
h	h	h	h	h	h	h, ɦ

Table 2.1: Orthographic correspondences: oral stops, affricates, and fricatives

IPA	NAPA (UVic)	NAPA (UBC)	U'mista	Grubb	Boas 1900	Boas 1947
m	m	m	m	m	m	m
n	n	n	n	n	n	n
l	l	l	l	l	l	l
y	y	y	y	y	y	y
w	w	w	w	w	w	w
[?] m	[˙] m	[˙] m	[˙] m	[˙] m		^ε m
[?] n	[˙] n	[˙] n	[˙] n	[˙] n		^ε n
[?] l	[˙] l	[˙] l	[˙] l	[˙] l		^ε l
[?] y	[˙] y	[˙] y	[˙] y	[˙] y		^ε y
[?] w	[˙] w	[˙] w	[˙] w	[˙] w		^ε w
a	a	a	a	a	a, ā	a, ā
ε, e	e	e	e	eh	ä, ë, e	ä, ë, e
i	i	i	i	i	i, ī, î, e, ē	i, ī, î, e, ē
o	o	o	o	o	â, ô	â, ô
u	u	u	u	u	u, ū, o, ō	u, ū, o, ō
ə, ɪ, ʊ	ə	ə	ḷ	e	E, ă, a	E, ă, a

Table 2.2: Orthographic correspondences: resonants

l is often used for *l* in digraphs, where it is unambiguous, and variations of barred and looped L are frequently seen (ł, ł, ł, etc.) depending on the resources of the font and whichever variant is most legible. The exact realization of *ǰ* and *ǰ^w*, and the position of glottalization apostrophes, likewise differ according to the resources of the font and legibility.

I use the NAPA orthography here because it allows underlying forms to be expressed unambiguously, even in the absence of schwas; I use the “UVic” variation because several of my consultants use or know this variant. I have also distinguished two different kinds of <*e*>: *e* and *ε*, but I often have trouble distinguishing them, so my transcription of a sound as *e* or *ε* should not be taken as authoritative.

2.1.4 Kwak’wala and English

When reading any linguistic work on Kwak’wala, it is important to acknowledge that, in whatever decade it was written, much scholarship made rather restrictive assumptions about how human languages work and what was possible and impossible in language. This is because the bulk of language scholarship had concentrated on European languages, and things that are common in European languages were assumed to be universal. When writers like Boas, Levine, and Anderson were trying to present Kwak’wala to a wider audience, portraying Kwak’wala as it really is meant emphasizing those ways in which Kwak’wala did *not* fit those assumptions.

So it can sometimes appear, when reading these works, that the authors are taking English

as an example of a “normal” language and trying to portray Kwak’wala as very strange, but this is not what they were doing. Rather, they were doing the opposite, trying to convince other scholars that English was not “normal” at all, and that there were other, equally good ways for language to “work” besides the way European languages work.

From the point of view of a European-centric grammatical theory, Kwak’wala grammar holds surprises at almost every level of grammar: in the way the sound system works, in the way words are put together, in the way sentences are put together out of words. I have heard from several speakers that from a Kwak’wala point of view, English can seem quite strange as well!

However, one overarching theme of Part II of this work is to clarify that Kwak’wala is not the *opposite* of English or familiar languages. For example, many phenomena that are sensitive to word class (that is, the noun/verb/adjective distinction) in English are not sensitive to word class in Kwak’wala, but this does not mean that there are *no* phenomena in Kwak’wala that are sensitive to word class (Chapter 3). Many sentences that require a copula (that is, a word like “be”) in English do not require a copula in Kwak’wala, but this does not mean that there are *no* sentences in Kwak’wala that require a copula (Chapter 4).

Rather, English and Kwak’wala illustrate two particular ways that languages can work (with respect to word class, with respect to copulas, with respect to focus, etc.); in some matters Kwak’wala is more flexible, and in some matters English is more flexible, but they are neither the same, nor opposites. While English is frequently invoked in this work, as an illustration or a contrast, there is nothing special about English, except that I can assume all readers speak English, and most of the literature on “focus” concerns English and related languages.

2.2 Words

2.2.1 Roots and suffixes

Most Kwak’wala words are complex, in the sense that they are made up of parts (**morphemes**) that are themselves meaningful. For example, we can see that many words having to do with knitting all have the same beginning (*yəq* or a variant of it), and many words having to do with paddling a boat all have the same beginning as well (*six^w* or a variant of it).

	<i>yəqa</i>	“to knit”	<i>six^wa</i>	“to paddle, to travel by boat”
(32)	<i>yəqalas</i>	“wool” (“knitting material”)	<i>six^walas</i>	“material for a paddle”
	<i>yəğayu</i>	“knitting needle(s)”	<i>siwayu</i>	“a paddle”
	<i>yəqⁱⁿux^w</i>	“someone good at knitting”	<i>siwⁱⁿux^w</i>	“someone good at paddling”

What is more, we can see that the morphemes that follow have systematic effects on the meaning as well: the form with *a* indicates the action, the form with *alas* indicates materials, the form with *ayu* indicates instruments and tools, and the form with *inuǎʷ* indicates someone with expertise.

Most Kwak’wala words are composed in this way, beginning with a **root**, usually but not always describing actions (for example, walking, dancing, or throwing) or states (being a man, being green, being hungry). Roots are followed by **suffixes**, which indicate a wide range of meanings: where the event takes place (in a house, on the ground, on the beach, in the stern of a boat, etc.), what part of the body is used or affected (the head, the hand, the eye, the neck, etc.), which participant in the event the word refers to (the undergoer, the instrument, the location, etc.), and many more meanings. Kwak’wala suffixes can mean such specific things, compared to suffixes in most languages, that they are sometimes called **lexical suffixes**, which means that most other languages can only express with an entire word what Kwak’wala tends to express as a suffix.

It is not unusual, in Kwak’wala, to find words in which the root has little or no meaning, and all or most of the meaning in the word is carried by the suffix. For example, in the word *ʔǎʔeǎsd* (“to want”), the root *ʔǎ* does not contribute any particular meaning, whereas the suffix *-eǎsd* means “want”.

There are no **prefixes** in Kwak’wala – that is, there are no morphemes that precede roots within a word – except for “reduplicative” prefixes that take a portion of the root and repeat it before the root, like the *ba-* in *babək’wa* (“try to be a man”), which I will discuss in the next section.

In this work, I will separate roots and suffixes with a dash (-), below the original word; note that this is different from Boas’s convention in which some suffixes are marked with a dash and others with an equals sign depending on their effect on the root.

- (33) six^walas
 six^w-alas
 paddle-material
 “material for a paddle”

Outside of this chapter, all of the Kwak’wala examples will have these four lines. The second one divides the meaningful morphemes, and attempts to provide a single, invariant form for each one. (Since the form of morphemes can change depending on what other morphemes are present, the first and second line might appear very different from one another.) The third line represents a rough idea of the meaning of each piece, often an abbreviation, but note that this is really just a label for each morpheme. The English label will not always – and often does

not – match the real meaning of the morpheme; often there is no exact English equivalent of what a morpheme means.

2.2.2 Sound changes due to suffixes

We can see above that the root can take several different forms. This is not arbitrary, but depends on properties of the suffixes that are added.

The addition of suffixes to a root (or even a root+suffixes combination) can cause the root (or the root+suffixes) to undergo systematic changes. For example, the root “man” can occur in many different forms depending on which suffixes attach to it.

- (34) *bəg^wanə^m* “man”
bag^wans “visitor” (literally, “unexpected man”)
babəg^wə^m “boy”
bək^wə^m “without expression, sternly” (literally, “man-face”)
bək^wəs “Wildman of the forest”
babək^wa “try to be a man”
bək^wə^m “First Nations person” (literally, “genuine man”)

These changes can be complicated, but they are usually systematic and predictable. The four main changes are:

- **Weakening:** changing the last sound from a plain sound (like *k^w*) to the corresponding “weak” sound (in this case, *g^w*). Above, the suffix *-anə^m* (a suffix that occurs on various words referring to people, among other uses) weakens the last sound of the root *bək^w-* to form the stem *bəg^wanə^m* (“man”).
- **Hardening:** changing the last sound from a plain sound (like *k^w*) to the corresponding “hard” sound (in this case, *k^w*). Above, the suffix *-(ə)s* (“outside, on the ground, in the forest”) hardens the last sound of the root *bək^w-* to form the stem *bək^wəs* (“Wildman of the forest”).
- **Lengthening:** changing the schwa (*ə*) in the root to an *a*. Above, the suffix *-ə^m* (“true, genuine”) lengthens the schwa of the root *bək^w-* to form the stem *bək^wə^m* (“First Nations person”).
- **Reduplication:** taking part of the root and repeating it before the root as a prefix. Which part is copied, and what other sounds can be added in the process, depends on what suffix

is added. Above, the suffix *-əm* (“small, diminutive”) causes the first part of the root *bək^w* to be “doubled” and forms *babəg^wəm* (“boy”).

Particular changes are associated with particular suffixes, and suffixes can have multiple effects. For example, the “genuine” suffix seen in *bak^həm* is both hardening and lengthening, whereas the “small, little” suffix seen in *babəg^wəm* is both weakening and reduplicating, while the “face” suffix seen in *bək^wəm* is neither. Since all three of these suffixes, themselves, appear as *əm*, seeing their effects on the root is the only way to tell whether the resulting meaning will be “genuine”, “small”, or “face”.

To distinguish suffixes with different effects, I will put a small *w* (for “weakening”), *h* (for “hardening”), *e* (for “extending”), or *r* (for “reduplicating”) after the dash:

- (35) siwayu
six^w-*w* ayu
paddle-INSTR
“a paddle”

Consonant mutation – that is, weakening and hardening – is predictable, although *s* (and possibly *c*⁶) has two different possibilities for each: it can weaken to either *d^z* or *y*, and it can harden to either *c^h* or *y^h*. There are also various suffixes which are somewhat irregular regarding whether they cause mutation. Other than for *s*, however, the output of mutation is predictable for each consonant.

⁶I have not manage to track down any roots or suffixes that unambiguously end in *c*.

	Consonant	Weakened version	Hardened version
	p	b	ṗ
	t	d	ṫ
	λ	λ	λ̇
	k	g	k̇
	k ^w	g ^w	k̇ ^w
	q	ǰ	q̇
	q ^w	ǰ ^w	q̇ ^w
	s	d ^z or y	ç or ý
(36)	ł	l	l̇
	x	n	ṅ
	x ^w	w	ẇ
	š	š	ṧ
	š ^w	w	ẇ
	m	ṁ	ṁ
	n	ṅ	ṅ
	l	l̇	l̇
	w	ẇ	ẇ
	y	ẏ	ẏ

When the root (or root+suffix combination) ends in a sound not included in this list (like *d* or *k̇* or *a*), the results are somewhat more complicated, but usually the result is that əʔ is placed before the suffix.

	wəd- (“cold”)	- _w a’ci (“container”)	= ẇədəʔa’ci (“refrigerator”)
(37)	yənk̇- (“slingshot”)	+ - _w (ə)k ^w (“-ed”)	= yənk̇əʔək ^w (“slingshotted”)
	ləʔsta- (“go in water”)	+ - _w a’ci (“container”)	= ləʔstəʔa’ci (“bathtub”)

I look more closely at weakening, hardening, lengthening, and mutation in Section §A.7.

2.2.3 Vowels and consonants

The above changes are not the only sound changes that roots and suffixes undergo. Sometimes roots and suffixes show systematic changes even when the suffix is not hardening, weakening, lengthening, or reduplicating. For example, the two words below actually share a root, but this root appears as either *gay* or *ge* depending on whether a vowel or consonant follows.

- (38) a. **gayuλ**
 “get from somewhere” or “be from somewhere”
- b. **gexʔid**
 “be from somewhere”

There are many correspondences like this – between *i* and *y*, between *ay* and *e*, between *ya* and *ε*, etc. – that suggest that the sound system of Kwak’wala – in particular, the relationship between the mental representations of words and the way they are pronounced – is more complicated than it at first appears, and that many things that appear to be vowels are treated by the sound system as if they were consonants, vowel+consonant sequences, or consonant+vowel sequences.

While this might seem to make the sound system more complicated, it allows for much simpler explanations of some of the more surprising root+suffix changes. For example, adding a weakening suffix (like *-_wʔ* or *-_wk^w* below) to a root that ends in *s* can change the *s* to *y*, but adding a weakening suffix to a root that ends in *as* changes the *as* to *e*!

- (39) $g^w as$ (“to chap”) + *-_wʔ* = $g^w eʔ$ (“chapped”)
 $x^w as$ (“to excite”) + *-_wk^w* = $x^w e k^w$ (“excited”)

This would be surprising – we might expect $g^w ayʔ$ and $x^w ayk^w$ – except we already saw above that *ay* was pronounced as *e* before a consonant.

I look into the sound system of Kwak’wala in more detail in Appendix A. While many of the issues discussed here are not central concerns of this thesis, it is nonetheless important to pay careful attention to these issues. Some observations and conclusions about focus depend, indirectly, on identifying when a particular morpheme is present or absent, and without a thorough understanding of the way morphemes combine into words, we run a greater risk of mis-identifying morphemes and drawing incorrect conclusions about how the form of words and sentences is related to their meaning.

2.2.4 Nouns and verbs

Wakashan languages, including Kwak’wala, have traditionally been described as lacking a noun/verb distinction, most famously in Swadesh (1938) and later in Boas et al. (1947); indeed, in the wider linguistic literature this is what the Wakashan languages are most famous for.

Speakers and learners of Kwak’wala sometimes express surprise when they hear this; it seems obvious to them that Kwak’wala has a noun/verb distinction, especially because it is

usually very easy to tell if an unfamiliar word refers to a thing or an action by its suffixes. Boas acknowledges this, saying that “the formal distinction of noun and verb is quite sharp” (Boas, 1911, p. 441) and “The classification of suffixes here given shows that a division of words into verbs and nouns has taken place, both being fairly clearly distinguished by suffixes” (Boas, 1911, p. 443). For example, you can generally tell that a word ending in *-la*, *-əla*, or *-ala* will have a verb-like meaning, and a word ending in *-eʔ* (sometimes pronounced *-ayʔi* or *aʔi* as well) will have a noun-like meaning; Boas et al. (1947, p. 313) provide the examples in (40) and (41).

- (40) *katəmala* “to have a painting on the front”
laxʷəmala “to have someone standing at the head”
lugʷala “to have a treasure”
qeqaʔla “to have one walking among others”

- (41) *katəmeʔ* “the painting on the front”
laxʷəmeʔ “someone standing at the head”
lugʷeʔ “treasure”
qeǵeʔ “person walking among others”

However, this is not the question that Boas was considering when he says that “there is no clear cut distinction between noun and verb.” (Boas et al., 1947, p. 280). What he meant is that a number of grammatical phenomena that we might expect to be sensitive to a noun/verb difference are not sensitive to this difference in Kwakʷala, leading to a question of whether “noun” and “verb” are really categories that Kwakʷala grammar is sensitive to. A central concern of Boas and his colleagues was whether familiar grammatical distinctions were valid for unfamiliar languages like Kwakʷala: they did not want to do what Hall (1888a) did and simply assume that Kwakʷala words fell into the same categories that European words did.

For example, in English, we observe that speakers can say “I <verb>” without any need for “am”, but they cannot just say “I <adjective>” or “I <noun>”; “am” is necessary to make these full sentences of English. In other words, only a verb can be the **predicate** of a sentence on its own; nouns and adjectives need something else to “join” them to the subject, termed a **copula**.

- (42) I eat. *I am eat.
*I tall. I am tall.
*I fisherman. I am a fisherman.

This is not the case in Kwakʷala; none of these (*həmapən*, *gəltəxstən*, *kiʔinuχʷən*, respectively) require any extra element. In other words, words that might appear to be verbs,

adjectives, and nouns can all be predicates directly, without need for copulas. (Other sentences do require copulas, which I will explore in Chapter 4, but these sentences do not.)

Meanwhile, we can observe that some suffixes in English are restricted in that they can only go on verbs, or only on nouns, or only on adjectives. While English speakers can describe an event of dancing in the past by using the term “danced”, they cannot describe cats in the past with “catted” or being tall in the past with “talled”. On the other hand, Kwak’wala *can* describe things this way, and indeed there are few suffixes that only attach to verbs or only attach to nouns.

	<i>kʷakʷala</i>	“to speak Kwak’wala”	<i>kʷakʷalaλ</i>	“will speak Kwak’wala”
(43)	<i>wayas</i>	“sweetheart”	<i>wayasλ</i>	“future sweetheart”
	<i>gəliəxst</i>	“tall”	<i>gəliəxsλ</i>	“will be tall”

What Boas was considering was whether *any* phenomena in Kwak’wala were sensitive to the apparent noun/verb distinction. Many of the most obvious distinctions in familiar languages like English (being a sentential predicate without “be”, being preceded by determiners like “the”, taking tense marking, taking plurality marking, etc.) did not apply in Kwak’wala. Each of these phenomena (being-a-predicate, taking determiners, taking tense marking, taking plurality marking, etc.) could apply to Kwak’wala words whether they appeared to be nouns or verbs.

However, since Swadesh and Boas, there have been various investigations into related and neighboring languages (e.g. Jacobsen, 1979; van Eijk and Hess, 1986; Demirdache and Matthewson, 1995; Wojdak, 2001) that observe that just because a language fails to fulfill some English-language tests for being a noun, verb, or adjective, it does not necessarily mean that *no* phenomenon in that language is sensitive to this difference. In Chapter 3, I re-investigate Kwak’wala word classes in light of this, and conclude that there are actually a variety of grammatical phenomena in Kwak’wala that are sensitive to whether a word is a noun, verb, or adjective.

2.3 Sentences

2.3.1 Basic word order

Kwak’wala sentences have what is known as **Verb-Subject-Object** (or **VSO**) order. The verb (*həmap*, “eat”) comes first, followed by the subject (*gada wacix*, “this dog”), followed by the object (*xə kalica*, “the carrot”).

- (44) a. **hə́mapgada wáćix** ǰa **kalica**
 (eat) (dog) (carrot)
 V S O
- b. This **dog** is **eating** a **carrot**.
 S V O

This terminology, however, is slightly misleading since, as we saw above, nouns and adjectives can be predicates as well. Kwak’wala does not necessarily put the *verb* first, it puts the *predicate* first. It is not uncommon to see nouns used as predicates, and verbs used as subjects. For example, in response to a question meaning “What does Pat want?”, one of the ways of phrasing the answer “Pat wants a shirt” is as follows:

- (45) **ǰásǰəneyí** ǰəǰǰəǰǰsdəsəwéǰs Pat
 Literally: “That wanted by Pat **is-a-shirt**.”

The predicate of this sentence is *ǰásǰəneǰ* (“shirt”, or “to be a shirt”), and the subject is *i ǰəǰǰəǰǰsdəsəwéǰs Pat* (“the one(s) wanted by Pat”, or “what Pat wants”, or “Pat’s wanted-one(s)”). (I will explain the composition of this subject further in Section §2.3.4.) Sentences like the above have a very specific usage – they serve to contrast “shirt” with other things that Pat might have wanted – and play an important role in this investigation. I look into these sentences in more detail in many places in these chapters, but especially in Chapter 6.

2.3.2 Enclitics

One important consideration in the interpretation of Kwak’wala sentences is that certain short word-like elements *modify* the following word, but *attach to* the previous word. For example, the *gada* in Example (44a), meaning roughly “this”, is indicating the location of the dog (*wáći*) but is attached to the previous word *hə́map* (“eat”). This is systematic; particular short words (the Kwak’wala equivalents of “this”, “that”, “my”, etc.) systematically “pile up” on the previous word, even though they form a structural unit with the word or words that follow.

We can see this in two different lines of the same story, about how the *bə́k’wəs* (Wildman of the forest) helps a lost boy. Both of these lines mean the same thing, but the subject of the sentence (Wildman) is in a different position each time. What is important to observe is that the *i* (indicating that the Wildman is far away and/or not currently present) occurs before *bə́k’wəs* each time; whenever *bə́k’wəs* moves, it moves as well.

- (46) a. ləmisi Bək^ʷəs nika
 “Then **Wildman** said...” (Cranmer and Janzen, 2014)
- b. ləmis niki Bək^ʷəs...
 “Then said **Wildman**...” (Cranmer and Janzen, 2014)

This is one among many reasons to consider that *i* and *bək^ʷəs* together form a structural unit (a **constituent**), even though the *i* is pronounced as a part of the previous word, as if it is a suffix.

There are also many such short words that modify the sentence as a whole, or a phrase as a whole, but attach as if they are a suffix to the first word in the sentence or phrase. This particular position, called **second position**, is an important position in a Kwak’wala phrase; many things (like tense markers, and the subject, and markers of visibility) occur in this position within their sentence or phrase.

For example, *t̚* marks sentences that contrast with previous sentences in certain ways, like “but” does in English. *t̚* appears on the first word of the sentence, as if it were a suffix to that word, regardless of whether that word is the contrastive part or not. For example, in example (47a), it appears on the word for “bigger” (*walasağawe*), while in example (47b) it appears on the word for “still” (*ʔox^wsem*), and in example (47c) it appears on the word for “not” (*kiʔs*).

- (47) a. w^ʷalasağawet̚uχ kasuχ nulas
 (Masaki’s car is big...) “**But** his brother’s car is bigger.”
- b. ʔox^wsemist̚i laχ^wili Ayako.
 (Hannah has fallen asleep...) “**But** Ayako is still standing.”
- c. kiʔst̚a he ǵ^wigili
 (She looks like someone else...) “**But** she doesn’t act like her.”

Elements like *i* and *t̚*, which attach to the previous word whether or not they are actually modifying that particular word, are called **enclitics**. Many languages have enclitics – the possessive *ʒ* in English is an enclitic – but Kwak’wala is notable for how just many words in the language are enclitic, and how many enclitics can “pile up” at once on the previous word.

In the rest of this work, enclitics are indicated with a preceding equals sign, like =*i*; note that this differs from Boas’s (1947) usage of the equals sign to mean a weakening suffix. It is often difficult to tell whether a particular suffix-like morpheme is actually a suffix or an enclitic, and I suspect that some morphemes have both suffix-like and enclitic-like uses. When I put a dash to indicate a suffix (-*X*) or an equals sign to indicate an enclitic (=*X*), it should be noted that this is just a hypothesis; often it is necessary to choose one despite limited evidence one way

or the other.

2.3.3 Determiner phrases

We saw above that subjects form a unit with enclitic elements, like the =*i* in =*i* *bəkʷəs*; this is a pervasive feature of subjects, objects, and other phrases that describe people and things. In many languages these units would be called (somewhat informally) **noun phrases**, but this terminology would be slightly misleading for Kwakʷala; it is important to remember that arguments need not be nouns, as such. Rather, it would be better to call these **determiner phrases**: phrases introduced by determiners (like =*i*) whether or not what follows is a noun.⁷

These “determiners”, of which there are various kinds, express a number of different meanings. For example, in the determiner phrase =*uxda* *gʷiʔgʷəsux* in example (48), the enclitics that precede and follow *gʷiʔgʷəsux* (“pigs”) mark it as the subject of this sentence, as being neither very near nor very far from the speaker, and as being visible.

- (48) *həmapuxda gʷiʔgʷəsux* *ǰuxda xətəmǰ*
“**The pigs** are eating the carrots.”

Determiner phrases do not always have a word or phrase that follows the determiners; sometimes a sequence like =*uxda* occurs on its own and acts like a pronoun. There are also special pronouns that occur here, in the same position as =*uxda*, like the first person (me) pronoun =*ən* and the second person (you) pronoun =*s*. It is important to note that Kwakʷala pronouns do not indicate gender – there is no difference between “he”, “she”, and “it”. Instead of marking third person (he/she/it) pronouns for gender, Kwakʷala systematically distinguishes third person pronouns according to their relative location (near the speaker, further away, and much further away).

The first element in the determiner sequence encodes **case**; speaking roughly, whether the determiner phrase serves as the subject (no overt case mark), direct object (*ǰ* or *ǰa*), or indirect object (*s* or *sa*) of the sentence. However, it should be emphasized that these categories do not perfectly line up with English-language categories like direct and indirect object; various arguments that would be direct objects in English are expressed with *s(a)* in Kwakʷala (Boas et al., 1947, p. 285).

⁷In general, having separate terms for being a noun, and being used as a subject/object/argument, is necessary, and is especially necessary for Kwakʷala. One of the reasons it is difficult to interpret Boas’s claims about nouns and verbs is because by “noun” he sometimes means “a word in the formal class of nouns” and sometimes he means “used as an argument in a sentence”.

I am being somewhat informal, as well, in the choice of “determiner” to describe these particles and “determiner phrase” to describe this constituent. Strictly speaking, these elements would be different kinds of syntactic heads, and the whole unit is probably a **case phrase**; Chung (2007) gives an analysis along these lines.

- (49) a. =uǰda ǰətəmǰ
 “The carrot(s)”, as a subject.
- b. ǰuǰda ǰətəmǰ
 “The carrot(s)”, as a direct object
- c. suǰda ǰətəmǰ
 “The carrot(s)”, as an indirect object

The next element in the determiner sequence indicates, roughly, the locational relationship between the speaker and the entity being described, similar to “this” and “that” in English. This category of meanings is called **deixis**, and words that express deixis are called **deictic**. Entities marked with =*ga* are generally within arm’s reach of the speaker, those marked =*uǰ* are generally nearby but not right near the speaker, and those marked with =*i* are further away or absent entirely. This kind of marking is obligatory for subjects; objects and other arguments can lack it.

- (50) a. =**ga** loʔsix
 “This tree [**right here**]”
- b. =**uǰ** da ǰədaqəǰ
 “That woman [**over there**]”
- c. =**i** Barbara
 “Barbara [**not present**]”

There are also forms indicating who possesses the entity; =*ən* indicates that the first person (me) possesses it, =*ənʔs* that we (including you) do, =*ənuʔǰ* that we (excluding you) do; and =*uʔs* that the second person (you) possesses it. There is also an element =*da* that occurs in this position, whose meaning is difficult to pin down; I consider it in some more detail in Section §B.4.4.4.

There is also a sequence of determiners that occurs after the first word of the determiner phrase (that is to say, it occurs in second-position within the determiner phrase), indicating whether or not the entity is visible, re-specifying its deictic category, and potentially re-specifying who possesses it.

A more in-depth look at each class of determiner, and each determiner in each class, can be found in Section §B.4.4.

2.3.4 Headless relative clauses

As noted above, the determiner phrase does not have to be a “noun”. Many determiner phrases in Kwak’wala appear to be, instead, **headless relative clauses**. A relative clause is something like “that Pat wants” in (51a) or (51b).

- (51) a. “I saw the shirt **that Pat wants.**”
b. “I saw the one **that Pat wants.**”

In sentences like (51b), Kwak’wala does not use a word like “one”; it does not use a word there at all. Rather, it uses the relative clause without an overt word (“head”) that it describes – in other words, “headless”. There is one very important consideration, however, in that the resulting determiner phrase will always refer to what would have been the subject of the relative clause. If you want to say “the [one that] Pat wants”, you have to say “the [one that] was wanted by Pat” instead. This can then be used as an argument (for example, a subject or direct object) in a sentence.

To construct the Kwak’wala equivalent of the bolded phrase in (51b), we begin with a verb, in this case the verb for “want”:

- (52) ʔəxʔeχsd
“want”

If we were to make a headless relative clause out of this, it would mean “the [one that] wants”, not “the [one that] was wanted”, so we have to passivize it, in this case with the suffix *-suʔ* (which will later show up as *-səwʔ* when it is followed by a vowel, similar to the *ay/e* distinction seen in Section §2.2.3).

- (53) ʔəxʔeχsdəsʊʔ
“be wanted”

To get “the [one that] was wanted”, we add determiners like those seen in Section §2.3.3; with these determiners we are indicating that the one wanted is not nearby and not visible.

- (54) =i ʔəxʔeχsdəsəwʔ
“the [one that] was wanted”

If the subject of the wanting (here, “Pat”) is expressed, it is expressed as a possessor of “the [one that] was wanted”. In the same way that we could say “Pat’s cat”, we say “Pat’s [one that] was wanted”.

- (55) =i ʔə́xʔə́xʂdəsə́wεʔs Pat
 “the [one that] was wanted **by Pat**”

While the “subject rule” may seem very restrictive, Kwak’wala has an extensive collection of “voice” suffixes, like those seen in (32), that allow almost any participant to be expressed as a subject; I detail some of these suffixes in Section §B.3.4.

Headless relative clauses like these are used extensively in Kwak’wala; in particular, they are necessary when forming many questions and various kinds of focus-marking constructions. For example, you can see =i ʔə́xʔə́xʂdəsə́wεʔs Pat in both the question in (56a) and the answer in (56b).

- (56) a. mačali ʔə́xʔə́xʂdəsə́wεʔs Pat
 “What does Pat want?” (Literally, “The [one that] was wanted by Pat is-what?”)
- b. qəsʔaneyi ʔə́xʔə́xʂdəsə́wεʔs Pat
 “Pat wants a shirt.” (Literally, “The [one that] was wanted by Pat is-a-shirt.”)

2.3.5 Questions

Question words in Kwak’wala are predicates, rather than determiner phrases. In other words, the Kwak’wala equivalent of “who” really means “is who?”, “what” means “is what?”, etc.

For example, if we want to say “Who is that man?” in Kwak’wala, ʔəng^w- (“is who”) will be the predicate, and =úx̄da bəg^wanəm̄x̄ (“that man”) will be the subject of the sentence.

- (57) ʔəng^wúx̄da bəg^wanəm̄x̄?
 Literally: “That man is-who?”

In order to express a question like “Who ate the fish”, then, it is necessary to construct a headless relative clause, like =ida hə́m̄xʔideʔ x̄a kútəla (“the [one who] ate the fish”), and have that be the subject of ʔəng^w-.

- (58) ʔəng^wida hə́m̄xʔideʔ x̄a kútəla?
 “The [one who] ate the fish is-who?”

Questioning a specific participant in an event – who it happened to, what tool or instrument was used, whose benefit it was for, etc. – therefore requires use of the voice suffixes mentioned above, because the element that is questioned has to be able to be subject of the relative clause.

A few types of questions, including location questions (like “where”) and some measure questions (like “how long”) have a different structure, which will be described in more detail

in Section §4.4.2. Yes/no questions are marked with a variety of morphemes; I will examine them in more detail in Sections §8.4, §B.4.3.4, §B.4.3.8, and §B.7.1.

2.4 Summary

In this chapter, I have tried to give an informal overview of some of Kwak'wala's most notable features and constructions.

This is in part because most readers will need an overview of how Kwak'wala works, but will not necessarily need to read the detailed explanations in the appendices regarding why I choose to analyze something one way rather than another. It is also because, for those who are interested in these explanations, I sometimes have to invoke a phenomenon that I have not yet gotten to in the text; having an overview ahead of time mitigates some of the potential confusion.

Readers who *do* intend a detailed reading of the argumentation are encouraged to skip ahead to Appendices A and B now, and read them before continuing to Part II.

Part II

Word class and predication

Chapter 3

Word class

3.1 Introduction

There is a long-standing debate in Wakashan linguistics regarding whether open-class lexical items are differentiated into word classes such as “verb” or “noun”. Initial investigation of the language family reported that noun/verb distinctions in Wakashan languages were weak, flexible, or nonexistent (Sapir, 1911; Boas, 1911; Sapir, 1921; Swadesh, 1938; Sapir and Swadesh, 1939; Boas et al., 1947).

For example, much has been made of “predicate/argument flexibility” examples like the Nuuchahnulth pairs in (59) and (60):

(59) a. **ʔi·h̄ma· qo·ʔasʔi**
he.is.large the.man
“The man is large.” (Swadesh, 1938, p. 78)

b. **qo·ʔasma ʔi·h̄ʔi·**
he.is.a.man the.large
“The large one is a man.” (Swadesh, 1938, p. 78)

(60) a. **mamo·kma qo·ʔasʔi**
he.is.working the.man
“The man is working.” (Swadesh, 1938, p. 78)

b. **qo·ʔasma mamo·kʔi**
he.is.a.man the.working
“The working one is a man.” (Swadesh, 1938, p. 78)

In the above examples, the 3rd person indicative marker *-ma·* can be attached to either stem to form a predicate, and the determiner *-ʔi·* can be attached to either stem to form an argument. Any such stem, whether apparently nominal, verbal, or adjectival, can serve either role.

Modern speakers of Kwak'wala show the same flexibility. We can see below that apparently nominal stems like *ǵiǵəmeʔ* (“chief”) and *ćədaq* (“woman”), apparently adjectival stems like *noǵad* (“intelligent, knowledgeable”), and apparently verbal stems like *gaǰ* (“come, arrive”) and *duxʷʔaλ* (“see”) can all serve as either predicates or arguments.

- (61) a. **noǵadida** **ǵiǵəmeʔ**
noq-_wad=i=da **ǵiq-_wm-aý**
mind-REL=3PROX=DET chief-NMZ-NMZ
“The chief is smart.”
- b. **ǵiǵəmey'ux** da **noǵadiǰ**
ǵiq-_wm-aý=uǰ da noq-ad=iǰ
chief-NMZ-NMZ=3PROX DET mind-REL=VIS
“The smart one is a chief.”
- (62) a. **ćədaqux** da **ǵiǵəmeʔ**
ćdaq=uǰ da ǵiq-_wm-aý
woman=3MED DET chief-NMZ-NMZ
“The chief is a woman.”
- b. **ǵiǵəmey'ux** da **ćədaq**
ǵiq-_wm-aý=uǰ da ćdaq
chief-NMZ-NMZ=3PROX DET woman
“The woman is a chief.”
- (63) a. **duxʷʔaλəli** da **ǵiǵəmeʔ** gaǰən
duxʷ-ʔaλ-l=i da ǵiq-_wm-aý gaǰ=n
see-achieve-ONGOING=3PROX DET chief-NMZ-NMZ come=1
“The chief saw me.”
- b. **ǵiǵəmey'ux** da **duxʷʔaλəlaǰ** gaǰən
ǵiq-_wm-aý=uǰ da duxʷ-ʔaλ-l=(a)ǰ gaǰ=n
chief-NMZ-NMZ=3MED DET see-achieve-ONGOING=VIS come=1
“The one that saw me is a chief.”

- (64) a. **gaḥ** muḥ da **giḡmeʔ**
gaḥ=muḥ da ḡiq-*w*m-aỵ
come=ver=3MED DET chief-NMZ-NMZ
“The chief arrived.”
- b. **giḡmeʔ** uḥ da **gaḥ** eḥ ləʔeḷa
ḡiq-*w*m-aỵ=uḥ da gaḥ=eḥ l-*w*iḷa
chief-NMZ-NMZ=ver=3MED DET come=VIS PREP-indoors
“The one that arrived (lit: came inside) is a chief.”

While the argument for Wakashan acategoriality rests largely on examples like the above, all we can establish from these is that Kwak’wala predicates are not limited to apparent verbs, and that Kwak’wala arguments are not limited to apparent nouns; we cannot establish from these examples that *no* phenomena in Kwak’wala are sensitive to a noun/verb/adjective distinction. As van Eijk and Hess (1986) observe, “It is quite normal for languages to have operations that are applicable to members of two (or more) different word classes, without these operations invalidating the word-classes themselves” (pp. 326–327). It remains possible that other phenomena are sensitive to a word’s part-of-speech, and the literature on related (Jacobsen, 1979; Wojdak, 2001) and neighboring (e.g. van Eijk and Hess, 1986; Demirdache and Matthewson, 1995; Burton and Davis, 1996; Davis and Matthewson, 1999; Montler, 2003) languages provides a number of potential directions of investigation (cf. Davis et al., 2014, for an overview). When we examine these phenomena in detail, we can observe that there is evidence at various “levels” of grammar for a noun/verb division within Kwak’wala, and at least some evidence that adjectives form a distinct class as well.

3.1.1 The word class question

The question at hand in this chapter is easy to conflate with other questions, and therefore it is valuable to clarify it. If we were to make a claim that “Kwak’wala does not distinguish between nouns, verbs, and adjectives”, there are various ways that this claim could be interpreted, only one of which is a matter of any controversy.

For one, the question at hand is not whether word class criteria from English and other European languages, applied to Kwak’wala, result in a clear noun/verb/adjective distinction. This is not a matter of controversy; many of the most salient English tests for word class produce no results for Kwak’wala. This is not necessarily an argument against the universality of word classes, however; it is only an argument against the universality of particular word class *criteria*.

It is also valuable to clarify at the outset that the question at hand is not whether Kwak’wala

shows *any* word class distinctions. It is uncontroversial that “particles” (e.g. determiners and other such small words) must be in a different class or classes than “predicates” (open-class lexical items like verbs, adjectives, and nouns). The “word-class” controversy discussed here is only about whether there are distinct sub-classes within the “predicate” class.

There is also a potential conflation between two questions:

- Do Kwak’wala *words* show a word-class distinction?
- Do Kwak’wala *roots* show a word-class distinction?

When presenting word class evidence for English, we sometimes conflate these two questions; in Kwak’wala, where words tend to have greater morphological complexity, it is important to keep these conceptually separate.

There is also a potential conflation with the question of whether nouns and verbs can be “distinguished” and whether any grammatical phenomena distinguish between them. It is fairly straightforward to observe a correspondence between particular suffixes and informal semantic classes – even the earliest descriptions of Kwak’wala notice this (§3.2.1) – but this does not necessarily provide evidence that Kwak’wala grammar is sensitive to these apparent morphological classes. It could be that Kwak’wala has two observable classes of words, but that neither the morphological nor syntactic systems of the language are sensitive to this distinction between the two.

The question at hand is just this: What phenomena, if any, in Kwak’wala appear to divide the lexicon into classes, particularly classes corresponding to the noun/verb/adjective classes we see in other languages?

The reason this question is important, for this investigation, is that we can observe in Chapter 6 (as well as in §3.5) an apparent class of sentences with systematically restricted focus interpretations, and the common factor they share is that their predicates are words that, in other languages, would be nouns. Other sentences – those with predicates that would be verbs or adjectives in other languages – are not restricted in this way. Since earlier descriptions had hypothesized that “noun” was not a Kwak’wala word class to the exclusion of “verbs” and “adjectives”, it is important to return to this question and see whether we can establish these classes by other means as well.

That is to say, if we intend to make the observation that “nominal predicates restrict focus interpretation”, it is valuable to take some time to determine whether “nominal” means anything in the language in question.

The discussion that follows will sometimes appear to be assuming a priori that certain words are nouns, verbs, or adjectives – that “dog” is a noun and “run” is a verb – but this is not

exactly the case. Rather, these are hypotheses; given the preponderance of languages treating “dog”-like words and “run”-like words very differently, this forms a natural starting place to see whether Kwak’wala does as well. As Davis (2011) explains:

Given the pervasive presence of a noun-verb distinction in natural language, for example, it is reasonable to hypothesize its presence in an unfamiliar language as a heuristic procedure, without making any a priori commitment to its existence. In practice, this involves setting up provisional classes of ‘notional nouns’ and ‘notional verbs’, and then systematically testing their behavior across as wide a range of syntactic tests as possible. The results tell us whether and to what extent the original hypothesis is correct (Davis, 2011, p. 2).

We do not know at the outset whether the words chosen correspond to the actual Kwak’wala classes; while there are some helpful morphological signposts (e.g. *-la*, *-x?id*, *-ay’*) for likely verbs and nouns, these are not absolute – a few words in *-la*, like *kutala* (“salmon, fish”) are probably nouns – and there is nothing in particular that can help us to select a class of likely adjectives, save that certain words (say, “good”, “tall”, or “green”) are often adjectives in other languages.

3.1.2 Zero-derivation?

Also, to address in advance a common misconception, it is important to note that when we speak of the “predicational freedom” of Kwak’wala words, that this is different in kind from the phenomenon by which English words like *man*, *drink*, or *shovel* can be used either as nouns or verbs. English allows quite free zero-derivation between word classes, and the process is somewhat productive and the results are somewhat predictable, but the resulting words have systematically different semantics.

For example, as a noun “shovel” is something like $\lambda x.x$ is a shovel; as a verb, something like $\lambda x.x$ uses a shovel (ignoring other arguments for simplicity). This zero-derivation is one of the most productive and transparent English zero-derivations; it works with most tools (that are not themselves derivations), including new tools like “Google”, and the meaning is roughly “to use that tool”. However, despite this relative transparency, the two meanings of “shovel” must be treated as distinct for the purposes of semantic calculation. When we say “Bob shovels”, the presence of verbal morphology indicates that the meaning of “shovel” must be $\lambda x.x$ uses a shovel; when we say “The shovel is heavy”, nominal cues like the determiner indicate the meaning of “shovel” must be $\lambda x.x$ is a shovel. These sentences cannot mean “Bob is a shovel” or “The one who shovels is heavy”. In Kwak’wala, the stem has the same meaning whether it

is used as an argument or predicate. *bəgwanəm* means $\lambda x.x$ is a man, and *subayu* means $\lambda x.x$ is an axe, whether they occur as arguments or as predicates.

3.2 The word class debate in Wakashan

3.2.1 Early observations of word classes

The observation that Wakashan languages lack a strong noun-verb distinction appears in early descriptions (Sapir, 1911; Boas, 1911; Swadesh, 1938; Sapir and Swadesh, 1939; Boas et al., 1947). However, it should be emphasized that not all early authors make the same claims or with the same degree of certainty.

The earliest description of Kwak’wala word classes comes from Hall (1888a), who claims that there are “eight parts of speech in the Kwagiutl language” (p. 61), and proceeds to give examples of Kwak’wala words sorted into familiar English classes. Although his class assignments are reasonable, the categories themselves are clear imports from familiar English grammars.

Sapir (1911) and Boas (1911) describe a two-way distinction between nouns and verbs, but paint a more nuanced picture regarding word class than is usually acknowledged: one in which there is a noun-verb distinction, but one that need not apply to every word or at every level of the grammar.

In both [Nootka and Kwakiutl] the stem¹ is, as far as its meaning allows, indifferently verbal or nominal and one or more suffixes are required to give rise to definitely verbal or nominal complexes (Sapir, 1911, p. 17).

Almost all Nootka and Kwakiutl words are noun or verb forms, there being almost no particles properly speaking (Sapir, 1911, p. 19).

Boas (1911) offers a similar sketch of Kwak’wala, in which there is a distinction between verbal, nominal, and “neutral” words. Like Sapir (1911), Boas claims that, aside from interjections and particles, which are their own distinct classes, all other roots are neutral and can become verbal or nominal through the application of suffixes.

Although the formal distinction of noun and verb is quite sharp, the great freedom with which nouns may be transformed into verbs, and verbs into nouns, makes a classification difficult. All stems seem to be neutral, neither noun nor verb; and

¹Boas and Sapir term “stems” what we would now call “roots”.

their nominal or verbal character seems to depend solely upon the suffix with which they are used, although some suffixes are also neutral (Boas, 1911, p. 411).

The classification of suffixes here given shows that a division of words into verbs and nouns has taken place, both being fairly clearly distinguished by suffixes. We find, however, that syntactically the distinction is not carried through rigidly; nouns being treated with great ease as verbs, and verbs as nouns (Boas, 1911, p. 443).

It should be noted that during this period, Sapir and Boas did not clearly distinguish between formal word class and predicate/argument function; “verb” sometimes meant the class of verbal stems, and sometimes meant “predicates”, while “noun” sometimes meant the class of nominal stems and sometimes meant “arguments”. In some passages it is clear which notion Boas means – when he says “treated as verbs” and “transformed into verbs” he probably means acting as a predicate – but sometimes it is not clear which he means.

When Boas says that verbs and nouns are “clearly distinguished by suffixes”, he is most likely referring to the fact that, for many words, whether it refers to a thing or to an action or state is clear from the final suffix of the stem: stems referring to actions and states very often end in *-la* or *-(x)_hid*, while stems referring to things often end in *-_wəm*, *-_wanəm*, *-_wayu/-ay_u*, *-_hi*, *-ay_’* (*-e?*), or *-uma(s)* (among many others). While this pattern is not inviolable and does not apply to every lexical item, it is also a difficult generalization to ignore: given an unfamiliar stem, it is usually predictable from its suffixes alone whether it refers to a thing or an action.

For example, Boas (1947, p. 313) notes the following correspondences, in which each stem with *-ay_’* denotes a thing whereas the corresponding stem with *-la* denotes an action or state. Although there *are* notable noun-like stems that end in *-la* and not every *-ay_’* stem seems to be a (prototypical) noun², alternations like the following are quite common and it is largely predictable which meaning each form will have.

- (65) a. *katəmala*
 kat-(ǧ)m-ala
 write-face-ONGOING
 “to have a painting on the front”
- b. *katəme?*
 kat-(ǧ)m-ay_’
 write-face-NMZ
 “the painting on the front”

²For these particular correspondences, Boas translated the *-ay_’* form nominally, although in the rest of Boas et al. (1947), *-ay_’* stems are variously translated as nouns, participles, or passives.

- (66) a. $\lambda x^w \text{ə} m a l a$
 $\lambda x^w - (\check{g}) m - a l a$
stand-face-ONGOING
“to have someone standing at the head”
- b. $\lambda x^w \text{ə} m e ?$
 $\lambda x^w - (\check{g}) m - a \acute{y}$
stand-face-NMZ
“someone standing at the head”
- (67) a. $\lambda u g^w a l a$
 $\lambda u g^w - a l a$
treasure-ONGOING
“to have a treasure”
- b. $\lambda u g^w e ?$
 $\lambda u g^w - a \acute{y}$
treasure-NMZ
“treasure”
- (68) a. $q e q \text{ə} l a$
 $q a s - _h q - l a$
walk-among-ONGOING
“to have one walking among others”
- b. $q e \check{g} e ?$
 $q a s - _h q - _w a \acute{y}$
walk-among-NMZ
“person walking among others”

It is important to remember, then, that later claims of acategoriality do not rest on nouns and verbs being *indistinguishable*; patterns like these are pervasive in the Kwak’wala lexicon.

3.2.2 Claims of acategoriality

The question, instead, is whether Kwak’wala nouns and verbs are distinct word classes in the sense that Kwak’wala morphosyntax treats them differently.

Such clear formal distinctions are hard to come by in Wakashan, particularly when one only

considers positive evidence. It is this absence of evidence, presumably, that leads Swadesh (1938) to put forward the strongest claim of Wakashan acategoriality:

One general type of word structure applies to all words with the exception of a limited number of particles. Normal words do not fall into classes like noun, verb, adjective, preposition, but all sorts of ideas find their expression in the same general type of word, which is predicative or non-predicative according to its paradigmatic ending (Swadesh, 1938, p. 78).

Swadesh's strong claim of Wakashan acategoriality was to become perhaps the most famous claim regarding Wakashan (or even Northwestern) languages. The example sentences in (59-60) are without doubt the most circulated Wakashan sentences in the wider linguistic literature, and they are frequently cited in introductory textbooks, such as Hockett (1958, p. 225), Hurford (1994, p. 143), Carnie (2002, pp. 59–60), and Miller (2011, p. 196). Indeed, many mentions of Wakashan acategoriality outside of the specialist literature rest solely on the presentation of the four sentences in (59-60).

In later work (Boas et al., 1947), Boas offers a statement more in line with Swadesh's acategoriality:

Strictly speaking there are only three classes of words: predicative terms, syntactic particles which define the function of the predicative terms, and exclamatory forms. Notwithstanding the occurrence of “nominalizing” suffixes there is no clear cut distinction between noun and verb. Any “verb” preceded by an article is a noun [...] and any noun with predicative endings is a verb (Boas et al., 1947, p. 280).

Levine (1977) echoes this:

Words are assignable to two major classes: particles, with extremely limited inflectional possibilities, and roots, which permit extensive inflectional and derivational suffixation (Levine, 1977, p. 99).

On the other hand, Boas frequently uses “noun” and “verb” even in Boas et al. (1947), including describing restrictions on suffixation based on these classes (§3.3.1, §3.3.2.1, §3.3.2.2).

3.2.3 Subsequent evidence for categoriality

Jacobsen (1979) provides data that show that Southern Wakashan categoriality is not as simple as a cursory look at (60) would indicate. For one, although nouns and verbs are alike in that

- c. ✗ q^wačal-aq-ʔiš nunuuk Susan
 beautiful-very-3SG.REAL **sing** Susan
 “Susan is a very beautiful **singer**.” (Wojdak, 2001, p. 624)

A similar restriction applies within arguments; only nouns can serve as the heads of modified arguments.

- (70) a. ✓ tiič-ači-ʔaλ-ʔiš ɣaa waʔič-ił-ʔi čakup
 alive-MOM-NOW-3SG.REAL DEIC sleep-inside-DET **man**
 “That sleeping **man** is in better health now.” (Wojdak, 2001, p. 625)

- b. ✗ čims-ʔiış ɣaa tupk-uml-ʔi haawapš
 work-3SG.REAL DEIC black-CL-DET **eat**
 “That black **eating one** is a bear.” (Wojdak, 2001, p. 625)

- c. ✗ yaacaa-ʔiš ɣaa nunuuk-ʔi q^wačal-aq
 leave-3SG.REAL DEIC sing-DET **beautiful-very**
 “That singing very **beautiful one** is leaving.” (Wojdak, 2001, p. 625)

So, even though a category-neutral account might be able to capture simple sentences like those from Swadesh (1938, p. 78), Wojdak (2001) shows that a category-neutral grammar will not correctly generate more complex sentences, with complex predicates and arguments.

3.3 Morphological evidence

While the morphological evidence for word class in Kwak’wala is not as strong as the syntactic evidence, a few phenomena do suggest that word formation is sensitive to the class of the base. There is not, however, the overwhelming morphological evidence that we have for English word classes, in which many affixes attach only to bases of a particular word class.

Compare, for example, the English comparative suffix *-er* with the comparable Kwak’wala comparative *-ḡaway’* as seen in (71).

- (71) a. w^walasaḡawe?
 w^walasa-ḡaway’
 large-more
 “bigger”

- b. gənləgawə?
 gnla-ğaway'
 young-more
 “younger”

In English, I can say that “I am taller”, but I cannot say that I am better at cleaning by saying that **“I cleaner”* or am a better/higher chief by saying **“I am (a) chieffer”*. In Kwak’wala, this is possible; although *-ğaway'* is very productive with adjective-like stems and does not seem so productive with verbs and nouns, it can indeed occur on stems that appear to be verbs and nouns⁴.

- (72) a. ʔaʔəkagilğawə?
 ʔa-ʔik_{-h}a-gi-l-ğaway'
 REDUP-good-try-make-ONGOING-more
 “to clean up/fix better [than someone else]”

- b. giqağawə?
 giq-ağaway'
 chief-more
 “high ranking chief”

(FirstVoices, 2009)

This is not to say that any derivational suffix may appear on any stem, but when they do discriminate, this discrimination does not seem to be a class discrimination. Not every suffix is entirely productive; some stems simply don’t seem to exist, and many combinations would not entirely make sense.

We find the same lack of discrimination in the inflectional morphology; categories like tense or plurality do not discriminate whether a root is nominal, verbal, or adjectival.

- (73) a. kwak^walaλ
 kwak^w-ka-l=(a)λ
 Kwagiulh-sound.like-ONGOING=FUT
 “will speak Kwak’wala”

- b. wayasλ
 wayas=λ
 sweetheart=FUT
 “future sweetheart”

⁴Strictly speaking *giq-* is a root, and thus might not have a class at all, but its derivations are mostly nominal and (72b) is at least translated as nominally rather than adjectivally.

As noted in §3.3, many morphological elements in Kwak’wala seem to be insensitive to word class; they add an identical meaning to a stem regardless of its apparent class. Whether added to nominal or adjectival or verbal roots, they modify the “be *X*” meanings that we see in their predicative uses (and which we would in any case expect given an ⟨e,t⟩ analysis of nouns and adjectives).

- (77) a. həmsa
hmsa
pick.berries
“to pick berries”
- b. həmsabuła
hmsa-buła
pick.berries-pretend
“to pretend to pick berries”
- (78) a. ławis
ławis
angry
“to be angry”
- b. ławisbuła
ławis-buła
angry-pretend
“to pretend to be angry”
- (79) a. gəla
gla
bear
“(to be a) bear”
- b. gəlabuła
gla-buła
bear-pretend
“to pretend to be a bear”

We can see from the desiderative *-ʔeḵsd* that this “to be *X*” reading of nominals is used even when a different interpretation might be more plausible:

- (80) a. subayuwəḥsd
 sup-_wayu-ʔəḥsd
 chop-INSTR-want
 “to want to be an axe” (not: “to want an axe”)
- b. diyəḥsd
 diy-ʔəḥsd
 tea-want
 “to want to be tea” (not: “to want tea”)

Although wanting to *have* axes and tea is much more likely than wanting to *be* either of these, the resulting interpretation is nonetheless “to want to be *X*”.⁶

However, there are at least four morphological elements in Kwak’wala that might exhibit a semantic contrast between verbal and nominal stems: the reduplicating “try” suffix *-_ha*, the “bring, lead” suffix *-_hud*, the “have” suffix *-_{nuk}ʷ*, and the instrumental suffix *-_wayu*. Each of these exhibits a polysemy that may be sensitive to word class.

3.3.2.1 *-_{rs}a*

To express “trying” in Kwak’wala, a verb stem⁷ is circumfixed with a reduplicant prefix *Ca-* and the hardening suffix *-_{rh}a*.⁸ Boas (1900, p. 717) terms this the “tentative”. Usually, this results in a “try to *X*” meaning:

- (81) a. laləʔa
 la-l-_{rh}a
 REDUP-la-try
 “to try to go”
- b. kakiḷa
 ka-kiḷ-_{rh}a
 REDUP-net.fish-try
 “to try to catch fish with a net”

⁶I should note, as I did in §3.3, that these particular “suffixes” are ones in which there is some evidence to consider them enclitic (§B.4.2). While these elements offer no particular evidence for a word-class distinction, nor do they offer particularly strong evidence *against* a word-class distinction.

⁷Although this process usually only applies to roots, it occasionally appears to apply to multimorphemic stems.

⁸This final *-a* in this *-_{rh}a* is the familiar stem-ending *a*, and as such does not appear in some further derivations, like in “school”: *qáquḷəʔaci* or *qáquḷəʔelas*.

- c. laluláa
 la-lawl-rh a
 REDUP-get-try
 “to try to get”

However, when added to “nouns” (Boas, 1911, p. 527), the meaning is not “to try to be X” as we might predict but “to try to *get* X”:

- (82) a. çacəlka
 ça-çlk-rh a
 REDUP-feather-try
 “to try to get feathers” (Boas, 1911, p. 498)

- b. pəpəwə
 pə-pw-rh a
 REDUP-halibut-try
 “to try to catch halibut”

- c. x^wax^wən^kwa
 x^wa-x^wnk^w-rh a
 REDUP-child-try
 “to try to get a child” (Boas, 1911, p. 498)

- d. ǵǵəka
 ǵa-ǵk-rh a
 REDUP-wife-try
 “to woo” (Boas, 1911, p. 527)

In Boas’s (1911, pp. 498, 527) examples of this suffix, all of the “try to X” meanings are built on apparently verbal bases, whereas all of the “try to get X” meanings are built on apparently nominal bases. Could this be a case of a word-class distinction, or is this just a case of these particular stems being more likely to be something one tries to obtain rather than something one tries to be?

The root *bəkw-* (“man”) provides a useful test case for this: both possible interpretations “to try to be a man” and “to try to get a man” would be reasonable. If *babək^wa* means “to try to get a man”, this would be compatible with the word-class hypothesis; if it merely means “to try to be a man”, then it is more likely that the above pattern is due to those roots describing particular sorts of objects: those that people tend to *try to obtain* rather than *be*.

When I constructed this form, my consultants responded that it meant “to try to be a man”

rather than “to try to get a man”; one volunteered the following as an example sentence:

- (83) babək^wuǰda hiǰa
 ba-bək^w=uǰ=da hiǰa
 REDUP-man=3MED=DET young.man
 “The boy is trying to be a man.”

This suggests that the “try to get *X*” meanings are tied to a particular subset of nouns, rather than being sensitive to a more general word class distinction.

3.3.2.2 *-_hud*

Boas et al. (1947, p. 332) identify another potential distinction, involving the suffix *-_hud* (“to bring, lead”).⁹ When used with verbs, it often means “to bring someone along or to lead them” (84), with nouns “to bring something to someone” (85).

- (84) a. pəǰud
 pǰ-_hu-d
 fly-bring-CHANGE
 “to lead someone flying” (Boas et al., 1947, p. 332)
- b. qayud
 qas-_hu-d
 walk-bring-CHANGE
 “to take someone along walking” (Boas et al., 1947, p. 332)
- c. siwud
 si^w-_hu-d
 to.paddle-bring-CHANGE
 “to guide someone home in a canoe” (Boas et al., 1947, p. 332)
- d. həmtud
 hmt-_hu-d
 give.piggyback.ride-bring-CHANGE
 “to carry child on back somewhere” (Boas et al., 1947, p. 332)

⁹This suffix probably complex; the final *d* is the form that we would expect *-xǰid* to take after *u*. Boas et al. (1947, p. 332) give one example of a word with *-_hu* on its own, and as we might expect it has a nominal reading: *muiǰu*, “food taken home after it has been delivered”.

- (85) a. *hamáɣəʔud*
hm-ay-hu-d
 eat-NMZ-bring-CHANGE
 “to bring food to someone” (Boas et al., 1947, p. 332)
- b. *wápaʔud*
wap-hu-d
 water-bring-CHANGE
 “to bring water to someone” (Boas et al., 1947, p. 332)
- c. *ləqʷaʔud*
lqʷa-hu-d
 wood-bring-CHANGE
 “to bring firewood to someone” (Boas et al., 1947, p. 332)
- d. *ʔaqʷaʔud*¹¹
ʔaqʷa-hu-d
 copper-bring-CHANGE
 “to bring a copper to someone” (Boas et al., 1947, p. 332)

However, apparent classificatory roots (cf. §B.2.3) – those that vary according to the shape of their theme – pattern with the nouns, meaning to bring something of that shape.

- (86) a. *wíkud*
wik-hu-d
 carry.long.thing-bring-CHANGE
 “to bring a long thing” (Boas et al., 1947, p. 332)
- b. *tínud*
tix-hu-d
 carry.round.on.shoulder?-bring-CHANGE
 “to deliver” (Boas et al., 1947, p. 332)
- c. *gəmxʔud*
gmǎ-hu-d
 carry.flat?-bring-CHANGE
 “to take blankets somewhere” (Boas et al., 1947, p. 332)

¹¹Boas has *ʔawqəʔud*, but this must be a typographical error.

This suggests that the *-_hud* division is, like *-_{rs}a*, a matter of likely interpretations rather than a division by word class.

3.3.2.3 *-nuk^w*

Another potential candidate for a semantic distinction based on word class concerns the suffix *-nuk^w* (“have”) (Sardinha, 2013). In most uses, *-nuk^w* adds a “to have something that is *X*” meaning:

- (87) a. businuk^w
 busi-nuk^w
 cat-have
 “to have a cat”
- b. çaỵinuk^w
 çaỵ-nuk^w
 younger.sib-have
 “to have a younger sibling”
- c. səx^wəganuk^w
 sx^w-(g)ga-nuk^w
 platter-dish-have
 “to have a platter”

However, when added to a passivized verb, the resulting meaning is “to have *X*’ed something unspecified”.

For example, in (88a), *ʔəχʔεχsd* means “to want”, and *ʔəχʔεχsdəsuʔ* means “to be wanted”, while *ʔəχʔεχsdəsuʔnuk^w* means “to want something [unspecified]”. It does not mean “to have something that is wanted” in the literal sense.¹²

- (88) a. ʔəχʔεχsdəsuʔnuk^w
 ʔəχ-ʔεχsd-sẉ-nuk^w
 do-PASS-want
 “to want something”

¹²Except, of course, insofar as English has this same metaphorical extension of “have”, in that English speakers can use “have a destination” to mean “is going somewhere” in the exact same way as Kwak’wala speakers use *ləʔasnuk^w* (89c).

b. nəqasuʔnuk^w
nqa-sw̄-nuk^w
drink-PASS-want
“to drink something”

c. hən̄xʔicuʔnuk^w
hm̄-xʔid-sw̄-nuk^w
eat-CHANGE-PASS-want
“to eat something”

d. xəltisuʔnuk^w
xlt-xʔid-sw̄-nuk^w
saw-CHANGE-PASS-have
“to saw something”

Some of the “voice” suffixes detailed in §B.3.4 receive a “to have something that is *X*” reading, while others receive the “to have *X*’ed something” reading. For example, stems in *-was* and *-wanəm* get a “to have *X*’ed something” reading (89).

(89) a. loʔanəmnuk^w
loʔ_w-anm-nuk^w
get-obtained-want
“to receive something”

b. gəluʔanəmnuk^w
gluʔ_w-anm-nuk^w
steal-obtained-want
“to steal something”

c. ləʔasnuk^w
l_w-as-nuk^w
go-PLACE-want
“to go somewhere”

d. midʔətnuk^w
mis-_wl-nuk^w
smell-STIM-have
“to smell something”¹³

Meanwhile, however, the suffixes *-ay'* and *-_wətk^w* do not participate in this construction; *-ay'* receives the ordinary “to have *X*” meaning while *-_wətk^w* was rejected.

- (90) a. *həmeʔnuk^w*
hm-ay'-nuk^w
 eat-NMZ-have
 “to have food” (not: “to eat something”)
- b. *✗ subək^wnuk^w*
sup-_wk^w-nuk^w
 chop-PART-have
 Intended: “to chop something”
- c. *✗ xəldək^wnuk^w*
xlt-_wk^w-nuk^w
 saw-PART-have
 Intended: “to saw something”

Unlike the distinctions seen in §3.3.2.1 and §3.3.2.2, this does not simply seem to be a “most likely interpretation” difference; *həmeʔ* and *həmxʔicuʔ* both mean, roughly, “what is eaten”. Rather, the distinction seems to be formal – that the *-ay'* puts the stem into a particular class of words, and the interpretation of the *-nuk^w* depends on membership in that class.

3.3.2.4 *-_wayu*

As noted in §3.3.1, Levine (1980) found that the “stimulus” voice suffix *-_wʔ* resisted being added to verbal stems. We can make a similar observation regarding the “instrumental” voice suffix; while *-_wayu* can be added to verbal stems, it has a different range of meanings than *-_wayu* added to roots and non-verbal stems (§B.3.4.1).

In its general “lexical” use, *-_wayu* can attach to roots (and stems) with both verbal and non-verbal meanings. In each of these forms it refers to some sort of instrument or tool, but even when it is attached to a root with an apparently verbal meaning, it does not exist in any particular thematic relationship with the corresponding verb stem.

¹³I do not have any naturally-occurring instances of *-_wʔ-nuk^w* in this construction; all such instances here are constructed, but accepted by speakers. *-sʔ-nuk^w* seems to be more natural for the “to X something” form of sense verbs, but it is worth noting that speakers can at least interpret *-_wʔ-nuk^w*, whereas the *-_wk^w-nuk^w* constructions below seem to be uninterpretable.

(91) a. yəǵayu
yq-_wayu
knit-INSTR
“knitting needles”

b. kʷəmdayu
kʷmt-_wayu
suck-INSTR
“cigarette”

c. qəgayu
qk-_wayu
bite-INSTR
“spring loaded trap used for small animals”

(Grubb, 1977)

On the other hand, when *-_wayu* attaches to transitive verbs – not just roots that refer to actions, but stems with verbal suffixes (like *-xʔid*) and roots that on their own are used as verbs (like *čw-*, “give”), we find a different set of meanings. The referent of these stems is not necessarily an instrument or tool, but it stands in a particular relationship with the corresponding verbal stem; specifically, it corresponds to what would play the role of an “oblique” object to that verb (Sherer, 2014).

(92) a. təpʔidayu
tp-xʔid-ayu
break-CHANGE-INSTR
“to be used to break”

b. kəlgaʔəndayu
klk-_waʔ-nd-ayu
plait-neck-CHANGE-INSTR
“[of one’s neck] to be plaited”

(Boas et al., 1947, p. 312)

c. čoyu
čw-ayu
give-INSTR
“to be given”

- d. qayayu
 qas-ayu
 walk-INSTR
 “to be taken for a walk”

While not restricted from occurring on verbal stems, like *-wʔ* is, this suffix nonetheless has a different interpretation when added to verbal stems, even those verbal stems that appear to be bare roots, like *čw-* and *qas-*.¹⁴

3.3.3 Evidence from postnominal enclitics

Jacobsen’s (1979) observations regarding Southern Wakashan determiners have counterparts for Kwak’wala, as well. Although I do not usually receive strong judgments about whether post-nominal enclitics are required, and speakers sometimes say they are optional, they are nonetheless nearly always present on apparent verbal arguments, whereas they seem to be frequently missing from nominal arguments.¹⁵

3.3.3.1 Verbal arguments

We can see this in the examples in (61-64): all of the non-nominal arguments (*noğad* “smart”, *duqʷʔatləla* “see”, and *gač* “come”) appeared with visibility enclitics, whereas the nominal arguments (*čədaq* “woman”, *giğəmeʔ* “chief”) lacked them.

In particular, the third distal invisible marker, which surfaces as *=εʔ* when the stem is possessed or would otherwise end in *a* (§B.4.4.8), is very frequently present on verbal arguments. Consider, for example, *kanukʷa* (“to have a car”), in a non-argument context such as (93).¹⁶

- (93) nugʷaʔəm kanukʷa
 nugʷa=ʔm ka-nukʷ=a
 be.1=VER car-have=A
 “It’s me who has a car.”

¹⁴This, I should point out, is the only Kwak’wala phenomenon of which I am aware that potentially identifies a set of roots as having an inherent word class.

¹⁵I should also caution, as I did in §B.4.4.8, that I do not always reliably perceive these markers, and so their presence or absence in my transcriptions should not necessarily be taken as evidence for or against the observation below. I have tried here to concentrate on distinctions that are easily perceived, like the difference between [-uʔs] and [-oʔoʔs].

¹⁶In order to see the *-a* ending clearly, it is necessary to use a construction, like a cleft, in which the verb is not immediately followed by a subject.

When it serves as a subject, however, plain *kanuk^wa* is rejected, and *kanuk^wε?* is required.¹⁷

- (94) a. ✓ ʔəng^wi da kanuk^wε?
 ʔng^w=i da ka-nuk^w=a=a?
 who=3_{PROX} DET car-have=A=INVIS
 “Who has a car?”
- b. ✗ ʔəng^wi da kanuk^wa
 ʔng^w=i da ka-nuk^w=a
 who=3_{PROX} DET car-have-A
 “Who has a car?”

Questions are often a better environment to isolate something as an argument, than declarative sentences with a nominal predicate; the word that follows the determiners in a nominal predicate construction *might* be the second word of a complex predicate (§B.5.1).

- (95) a. ʔəng^wida vannuk^wε?
 ʔng^w=i=da van-nuk^wa=a?
 who=3_{PROX}=DET van-have=INVIS
 “Who has a van?”
- b. ʔəng^wad^zida ʔəḥnug^wadeʔsa van
 ʔng^wa-d^z=i=da ʔḥ-nuk^w-ada=aʔ=sa van
 who-AUG=3_{PROX}=DET do-have-REL=INVIS=3_{POSS} van
 “Who has the van?”

We can see this noun/verb alternation with second-person possessive forms as well, since there is a noticeable difference in the postnominal possessive enclitic =*uʔs* depending on whether it is preceded by a visibility enclitic =*aquʔs* (“visible 2nd person possessive”) or =*əʔoʔs* ~ =*oʔoʔs* (“invisible 2nd person possessive”). Although nominal arguments can take the full postnominal enclitic sequence, they often do not, having only the possessive enclitic =*uʔs* (96) or nothing at all (97), whereas the verbal subjects in (98) have the full sequence.¹⁸

¹⁷I should note that I am not sure whether the first *a* in the sequence is the same “predicative” *a* that we see in *kanuk^wa* or same as the “possessive” postnominal *a* (§B.4.4.7).

¹⁸It does not seem that the difference is simply that verbs tend to end in *-a* whereas nouns do not; *nula*, identified by Boas et al. (1947, p. 228) as one of the few noun stems that do seem to reliably end in *-a*, is nonetheless *nuluʔs* in (96c).

- (96) a. $\acute{m}i\acute{m}a\acute{c}a\acute{l}u\acute{s}$ $g\acute{e}l\acute{g}\acute{e}\acute{\gamma}u\acute{m}a\acute{s}u\acute{s}$
 $\acute{m}\acute{y}\text{-}\acute{m}a\acute{s}\text{-}_h\acute{a}l=u\acute{s}$ $g\acute{l}\text{-}g\acute{l}\text{-}\acute{\gamma}u\acute{m}a\acute{s}=u\acute{s}$
 REDUP-what-kind=2POSS REDUP-crawl-thing=2POSS
 “What pets do you have?” (Lit: “Your animals are what kind?”)
- b. $\acute{\gamma}\acute{e}n\acute{g}^w u\acute{s}$ $\acute{\gamma}i\acute{y}a\acute{x}\acute{w}\acute{e}t\acute{u}\acute{s}$
 $\acute{\gamma}n\acute{g}^w=u\acute{s}$ $\acute{\gamma}i\acute{y}a\acute{x}\text{-}\acute{w}t=u\acute{s}$
 who=2POSS work-fellow=2POSS
 “Who do you work with?” (Lit: “Your coworkers are who?”)
- c. $\acute{\gamma}o\acute{m}\acute{e}n$ $g\acute{i}\acute{\gamma}\acute{e}\acute{\gamma}i\acute{q}\acute{o}l\acute{a}$ $\acute{x}u\acute{s}$ $\acute{n}u\acute{l}u\acute{s}$
 $\acute{\gamma}w\acute{a}=\acute{\gamma}m=n$ $g\acute{y}\text{-}g\text{-}_h\acute{i}q\text{-}l\acute{a}$ $\acute{x}=u\acute{s}$ $\acute{n}u\acute{l}=u\acute{s}$
 so=VER=1 REDUP-think-in.mind-ONGOING ACC=2POSS older.sib=2POSS
 “I was just thinking about your brother.”
- d. $\acute{k}i\acute{s}\acute{e}n$ $\acute{q}o\acute{\lambda}\acute{e}l\acute{a}\acute{x}u\acute{s}$ $\acute{\lambda}i\acute{g}\acute{e}m\acute{u}\acute{s}$
 $\acute{k}i\acute{s}=n$ $\acute{q}o\acute{\lambda}\text{-}l=(a)\acute{x}=u\acute{s}$ $\acute{\lambda}i\acute{q}\text{-}_w\acute{m}=u\acute{s}$
 not=1 know-ONGOING=ACC=2POSS name-NMZ=2POSS
 “I don’t know your name.”

- (97) $\acute{m}a\acute{c}a\acute{l}u\acute{s}$ $h\acute{i}m\acute{a}\acute{\gamma}u\acute{m}a\acute{s}$
 $\acute{m}a\acute{s}\text{-}_h\acute{a}l=u\acute{s}$ $h\acute{i}m\acute{a}\text{-}\acute{\gamma}u\acute{m}a\acute{s}$
 what=2POSS food-CLASS?
 “What kind of food do you have?” (Lit: “Your food is what kind?”)

- (98) a. $\acute{m}a\acute{c}a\acute{l}i\acute{s}$ $\acute{\gamma}\acute{e}\acute{x}\acute{\gamma}\acute{e}\acute{x}\acute{s}d\acute{e}s\acute{e}\acute{w}\acute{e}\acute{\gamma}o\acute{s}$
 $\acute{m}a\acute{c}a\acute{l}=i\acute{\gamma}=s$ $\acute{\gamma}\acute{x}\text{-}\acute{\gamma}\acute{e}\acute{x}\acute{s}d\text{-}\acute{s}\acute{w}=a=u\acute{s}$
 what=3PROX=2POSS do-want-PASS=A=2POSS
 “What do you want?” (Lit: “Your was-wanted is what kind?”)
- b. $\acute{m}a\acute{c}a\acute{l}\acute{\lambda}i\acute{s}$ $g\acute{a}y\acute{u}\acute{\lambda}o\acute{\gamma}o\acute{s}$
 $\acute{m}a\acute{c}a\acute{l}=\acute{\lambda}=i\acute{s}$ $g\acute{a}y\acute{u}\acute{\lambda}=a=u\acute{s}$
 what=FUT=3PROX=2POSS be.from=A=2POSS
 “What will you bring?” (Lit: “That originating from you will be what?”)

I am not certain whether verbal subjects *must* have this full sequence – as I noted above, I only rarely receive judgments about postnominal enclitics, and do not always perceive them correctly in any case. However, the pattern seen above is sufficiently reminiscent of Jacobsen’s

(1979) observations that it is worth pointing out.

3.3.3.2 Tensed nominal arguments

Again paralleling Jacobsen's (1979) observations, tensed nouns (99) behave more like verbs so far as postnominal enclitics are concerned, appearing with =εʔ (99) and =oʔoʔs (100).

- (99) a. ʔəng^waʔən wayasʔεʔ
 ʔng^w=(a)ʔ=n wayas=ʔ=a=aʔ
 who=FUT=1POSS sweetheart=FUT=A=INVIS
 “Who’s going to be my sweetheart [in our upcoming play]?” (Lit: “My future sweetheart will be who?”)
- b. məcalanawisi həməʔʔεʔs
 mə_{-h}al-ʔanawis=i hm-ay=ʔ=a=aʔ=s
 what-kind-MODAL=3PROX eat-NMZ=FUT=A=INVIS=3POSS
 “I wonder what he’s going to eat?” (Lit: “His future food will be what kind?”)
- c. duχ^wʔaʔələn ʔən ʔax^wanəmʔεʔ
 duq^w-ʔaʔ-l=n ʔ=n ʔax^w-_wanm=ʔ=a=aʔ
 see-achieve-ONGOING=1 ACC=1POSS love-NMZ=FUT=A=INVIS
 “I saw my future husband.”
- (100) a. ʔəng^wiʔs wəʔox^wdoʔoʔs?
 ʔng^w=iʔ=s wauk^w=xd=a=uʔs
 who=3PROX=2POSS another=R.PAST=A=2POSS
 “Who were you with?” (Lit: “Your other was who?”)
- b. məcaliʔs ʔiyaxdəmkənʔoʔoʔs
 məcal=i=ʔs ʔiyax-xdm-kn=ʔ=a=uʔs
 what=3MED=2POSS work-proper-body=FUT=A=2POSS
 “‘What kind of clothes will you be wearing at work?’” (Lit: “Your future work-uniform is what kind?”)
- c. ʔəχʔεχsdən qən kəkad_wəx^wsila ʔuʔs buk^wʔoʔoʔs
 ʔχ-ʔεχsd=n q=n kə-kat-_wk^w-ksi-la ʔ=uʔs buk^w=ʔ=a=uʔs
 do-want=1 for=1POSS REDUP-write-PART-occupy-ONGOING ACC=2POSS book=FUT=A=2POSS
 “I want to read the book you’re writing” (lit: “your future book”).

As a side note, although verbs and tensed nouns are treated similarly as arguments, it is probably not accurate to say that tense “converts” nouns into verbs. Tense seems to be enclitic – at least, it follows elements like =ʔm that do seem to be enclitic, and like enclitics follows the first word of the phrase no matter whether it is the head, as in (101) where it attaches to *nəmuk^w* (“other”) – and thus probably does not serve to change the morphological class of the stem.

- (101) *Context: We had been playing “Guess what animal I am”, and a new player came in and joined the game. His secret animal was the squirrel, but someone earlier had chosen a squirrel as well. After the animal is revealed, a speaker is wondering if anyone can remember who the other squirrel had been.*

ʔəng ^w ida	nəmuk ^w deʔ	təminasa
ʔng ^w =i=da	n̄m-uk ^w =xd=a=aʔ	tminas=a
who=3DIST=DET	one-person=RPAST=A=INVIS	squirrel=A

“Who was the other squirrel?” (Lit: “The past other squirrel was who?”)

Rather, I would suggest that tense is indicative of a clause, and both verbal and tensed nominal arguments are of clausal origin. We see the same morphology occurring on *ʔiʔs* when an argument that is presumably of clausal origin serves as the subject of (102).

- (102) *masi* ʔiʔsʌʔoʔs la yaqəntəmaǰ
m̄as=i ʔiʔs=ʌ=a=uʔs la yaqnt-k-(ǰ)m=(a)ǰ
 what=3PROX not=FUT=A=INVIS=2POSS go speak-sound-face=ACC
 “Then why not go talk to her?” (Rough lit: “Your not-already-talking-to-her is what?”)

It should be emphasized that this is not a general property of tensed nouns, just tensed nouns used as arguments. Tensed nouns in non-argument positions do not need anything beyond the tense, even if given second person possessive inflection, as seen in (103a) and (104).

- (103) a. *k̄iʔsʌn* n̄əmuḡ^waʌuʔs
 k̄iʔs=ʌ=n n̄muk^w-_wad=ʌ=uʔs
 not=FUT=1 friend-REL=FUT=2POSS
 “I’m not going to be your friend!”
- b. *q̄^wəlisʔəmʌn* n̄əmuḡ^waʌ
 q̄^wlis=ʔm=ʌ=n n̄muk^w-_wad=ʌ
 be.own=VER=FUT=1 friend-REL=FUT
 “I’ll be my own friend.”

- (104) $\dot{k}i, \dot{k}i?s\lambda i$ nug^{walc} $wayas\lambda u?s$
 $\dot{k}i, \dot{k}i?s=\lambda=i$ $nug^w=(a)\lambda=s$ $wayas=\lambda=u?s$
 no not=FUT=3PROX be.1=FUT=2POSS sweetheart=FUT=2POSS
 “No, I’m not going to be your girlfriend.”

3.3.3.3 Denominal verbal arguments

We see this as well when we compare arguments that contain nouns with those that contain denominal verbs. The suffix *-x λa* (“be called, be named”) provides an interesting example. Although *-x λa* stems are usually predicates, they occur as arguments with a particular shade of meaning, something like “the so-called *X*”, as in (105-107), and seem to be used when the speaker knows a name but doesn’t know who or what it refers to. Such stems, although based on proper names, invariably seem to occur with the postnominal $=\varepsilon?$ typical of verbal arguments.

- (105) *Context: We were chatting about Napoleon and the origin of the English phrase, “met his Waterloo”. A speaker notes that she doesn’t know what or where “Waterloo” refers to.*

$\dot{k}i?s\dot{s}en$ $mal\dot{t}ela$ $\check{x}a$ $Waterlux^w\lambda\varepsilon?$
 $\dot{k}i?s=n$ $mal\dot{t}e-la$ $\check{x}a$ $Waterlu-x\lambda a=a?$
 not=1 recognize-ONGOING ACC Waterloo-be.called=INVIS
 “I don’t know this so-called ‘Waterloo’.”

- (106) *Context: Stacey is trying to buy food for Pat’s pet “Fluffy”, but had neglected to ask what kind of animal Fluffy actually was.*

$\dot{w}aci\check{x}enti$ da $F\dot{o}lafix\lambda\varepsilon?$
 $\dot{w}as-h_i=\check{x}nt=i$ da $Flafi-x\lambda a=a?$
 dog-NMZ=MODAL=3PROX DET Fluffy-be.called=INVIS
 “This so-called ‘Fluffy’ must be a dog.”

- (107) *Context: Another elicitor and I were having a side discussion about whether a particular stem had a “normal a” or an “underlined a” (that is, a or ə). A speaker volunteers, jokingly:*

kʲiʔsən qoʎa ʃa “normal a”xʎεʔ
 kʲiʔs=n qoʎa ʃa normal a-xʎa=aʔ
 not=1 know ACC normal a-be.called=INVIS
 “I don’t know this so-called ‘normal a’.”

3.4 Syntactic evidence

We can find more evidence of Kwak’wala word class in the syntax. Although, as seen in (61-64), words of any apparent class can serve as sentential subjects or predicates, the rest of the syntax is not so free. For example, if we set aside the clause level and look inside DPs, we find their syntax to be much more restricted. If there were only a PRED label in Kwak’wala grammar and no labels along the lines of N, V, and A, the grammar would generate a much wider variety of DPs than speakers produce or accept.

3.4.1 Adjective-noun order

The relative order of apparent adjectives and nouns in noun phrases is fixed: the adjective always precedes the noun it modifies.

- (108) *Context: The table is covered in brightly-colored wooden people; a green one is lying down.*

- a. ✓ miʃuʃ da ʎnʃʔstu bəgʷanəm
 miʃ=uʃ da ʎnʃ-ʔstu bkʷ-wanm
 sleep=3MED DET green-eye man-person
 “The green man is sleeping.”
- b. ✗ miʃuʃ da bəgʷanəm ʎnʃʔstu
 miʃ=uʃ da bkʷ-wanm ʎnʃ-ʔstu
 sleep=3MED DET man-person green-eye
 Intended: “The green man is sleeping.”

One could potentially offer a counterargument that this ordering is semantic in nature. For example, one could argue that attributive constructions are not sensitive to word class, but that

speakers always order attributive constructions so that more “accidental” properties come first and more “essential” properties come later. However, this would likewise predict that the verb-noun constructions seen in §3.4.2 should be strictly ordered, which they do not appear to be.

That adjectives always precede nouns is not always immediately apparent; I have occasionally found examples that could be taken as counterexamples. Each of these apparent counterexamples stems from the fact that DP boundaries are unclear; the claim above is that adjectives precede nouns within DPs, but the right boundaries of DPs are not overtly marked. Consider the sentence in (109), in which there is an adjective right after the noun, in apparent contradiction to ordinary adjective ordering. Whether this is one clause (“That’s a pink bird that is singing”), or several (“That’s a bird, it’s pink, it’s singing”) is not clear.¹⁹

(109) *Context: The consultant is describing a picture containing many things, one of which is a pink bird that is singing.*

hemasida	ḡiḡəʎimas	pinkʔstubidu
he=ḡ=as=i=da	ḡi-ḡəʎ-imas	pink-ʔstu-bidu
be.3DIST=VER=PRSNTV=3PROX=DET	REDUP-fly-NMZ	pink-eye-DIMIN
la	dənḡəladʔikas	
la	dənḡ-əla-dʔi-kas	
now	sing-ONGOING-AUG-AUG	

“And there’s a pink bird singing” or “And there’s a bird, it’s pink, it’s singing”.

This sentence does not necessarily constitute a counterexample to adjective-noun order, however, since it is possible that this utterance actually constitutes several sentences. For many meanings, it appears more natural in Kwak’wala to express the idea with two sentences rather than using attributive modification; attributive modification seems to be avoided except when expressing contrast. When the adjective is merely providing additional information, speakers usually express the adjective as the main predicate of its own sentence.

Not every Kwak’wala sentence has an overt subject, particularly when they follow sentences with subjects; that these adjectives lack overt subjects does not necessarily mean they are not sentences. That they *can* have overt subject pronouns, and often do, is strong evidence that they are indeed separate sentences.

¹⁹It is probably not a single clause – the auxiliary *la* would not ordinarily appear in this position. It could, however, be two clauses (“There’s a pink bird; it’s singing”) which could still suffice for a counterexample.

The prosodic evidence here – i.e., whether there were intonational breaks in between each putative sentence – is unclear. This particular sentence was offered with significant hesitations in between each word, but they may have been pauses to remember words rather than genuine sentential breaks.

- (110) *Context: A clairvoyant person is walking down the street, seeing the futures of various passers-by.*

duχ^w?aλən ǰa **hiʔa**, **gəltəχstaλi**
 duq^w-?aλ=n ǰa hiʔa, glt-_hχst=(a)λ=i
 see-achieve=1 ACC young.man, long-??=FUT=3PROX
 “I saw the boy; he will be tall.”

In addition, consultant comments suggest that these are indeed two sentences. When these utterances are presented to speakers, they sometimes reject such utterances (“it doesn’t go there”) and sometimes accept them, but when they *are* accepted some speakers qualify this with “It needs a comma” or “There’s a pause in there.”

We can also see this by adding a time adverbial that is compatible with the matrix predicate, but incompatible with the supposed modifier. In the following sentences, when the adverbial *lənsλe?* (“yesterday”) follows *gəltəχstaλi* (“will be tall”), the resulting utterance is incoherent because the adverbial modifies this second sentence, not the first.

- (111) ✗ duχ^w?aλaxdən ǰa **hiʔa** **gəltəχstaλi** lənswət
 duq^w-?aλa-xd=n ǰa hiʔa glt-_hχst=(a)λ=i lns-wt
 see-achieve-_{rp}=1 ACC young.man long-end=FUT=3PROX next.day-PAST
 Intended: “I [saw [the boy who will be tall] yesterday].”
 Actual: “I saw the boy; he will be tall yesterday.”

If *gəltəχstaλi* were indeed attributive, as the verbal relative clause *ǰa kwak^walaλe?* (“the one who will speak Kwak’wala”) is below in (112), then *lənsλe?* would be acceptable in this position, since it could still modify the matrix predicate.

- (112) ✓ duχ^w?aλən λaǰa **gənanəm** ǰa **kwak^walaλe?**
 duq^w-?aλ=n λ=(a)ǰa gnannm ǰa kwak^w-ka-l=(a)λ=a=a?
 see-achieve=1 CONN=ACC child ACC Kwagiulh-sound-ONGOING=FUT=a=INVIS
 lənswət
 lns-wt
 next.day-PAST
 “I saw [the boy who will speak Kwak’wala] yesterday.”

3.4.2 Verb-noun order

Unlike adjective-noun DPs, DPs consisting of a noun and a verb can occur in either order.

- (113) a. $g^wəsunuk^wux̣da$ **miḥa bəg^wanəm**
 $g^wsu-nuk^w=uḥ=da$ miḥa bk^w-wanm
pig-have=3MED=DET sleep man-person
“The sleeping man has a pig.”
- b. $g^wəsunuk^wux̣da$ **bəg^wanəm miḥa**
 $g^wsu-nuk^w=uḥ=da$ bk^w-wanm miḥa
pig-have=3MED=DET man-person sleep
“The sleeping man has a pig.”
- (114) a. $miḥux̣da$ **$g^wəsunuk^weḥ$ bəg^wanəm**
 $miḥ=uḥ=da$ $g^wsu-nuk^w=eḥ$ bk^w-wanm
sleep=3MED=DET pig-have=VIS man-person
“The man with a pig is sleeping.”
- b. $miḥux̣da$ **bəg^wanəm $g^wəsunuk^wa$**
 $miḥ=uḥ=da$ bk^w-wanm $g^wsu-nuk^wa$
sleep=3MED=DET man-person pig-have
“The man with a pig is sleeping.”

DP-internal post-nominal verbs appear to be relative clauses modifying the noun; they can, for example, take objects and be modified by adverbials such as *ləns^wəł* (“yesterday”) or *ləns^lε?* (“tomorrow”).

- (115) $ẉidux̣da$ $g^wəsux̣$ ***dalasu?sada*** ***d^za?stu***
 $ẉi-d=uḥ=da$ $g^wsu=x̣$ *d-ala-s^w=sa=da* *d^za-?stu*
WH-where=3MED=DET pig=VIS take.in.hand-ONGOING-PASS=3POSS=DET blue-eye
bəg^wanəm
 bk^w-wanm
man-person
“Which pig is the blue man carrying?”/“Where is the pig that is carried by the blue man?”²⁰

²⁰“Which” questions are not straightforwardly translatable into Kwak’wala (§B.7.3).

3.4.3 Heads of relative clauses

It also appears that verbs cannot be the heads of relative clauses, consistent with claims by Demirdache and Matthewson (1995) and Baker (2003) that, universally, only nouns can head relative clauses.

- (116) *Context: A pet thief (like the ones in 101 Dalmatians) has a bag with an animal inside. The animal is snoring.*

✗ ʔəng^wuχda χəntalaχ χuʔs loʎanəmaquʔs?
 ʔng^w=uχ=da χnt-(k)_ha-l=(a)q χ=uʔs loʎ-_wanm=aq=uʔs?
 who=3MED=DET snore-sound-ONGOING=VIS ACC=2POSS get-obtained=VIS=2POSS
 “What’s that snoring thing you caught?”

- (117) *Context: I gave someone a strange animal, which has curled up on the floor and fallen asleep.*

✗ məcaɫd^zuχda miχaχ χuʔs coweɣaquʔs gaχən
 məcaɫ-d^z=uχ=da miχ=(a)q χ=uʔs co-ɣ=aq=uʔs gaχ=n
 what-AUG=3MED=DET sleep=VIS ACC=2POSS give-NMZ=VIS=2POSS come=1
 “What is that sleeping thing that you gave me?” (=1232)

The consultant who rejected these suggested that these would be acceptable with *ɣəχuʔs* (roughly, “the one that...”), or with “a comma” before the *χuʔs* – in other words, that the relative *would* be appropriate as an appositive (§B.6.5).

3.4.4 Complex predicates

One of the primary arguments for word class distinctions in Salishan languages regards the possibilities for complex predicates: that only particular combinations of categories can serve as a complex nominal predicate (Demirdache and Matthewson, 1995; Davis et al., 1997; Davis and Matthewson, 1999; Montler, 2003), and this was confirmed in Nuuchahnulth by Wojdak (2001).

I have not managed to get many judgments on similar sentences in Kwak’wala; speakers usually express such ideas using different constructions, sometimes going to great syntactic lengths to avoid complex predicates (§B.5.1). There are two notable exceptions to this: *ʔik* (“good”) and *ɣaksəm* (“bad”).

(118) a. ʔik bəg^wanəmən ʔump
 ʔik bg^wanm=n ʔump
 good man=1POSS father
 “My father is a good man.” (Goodfellow et al., 1991, p. 69)

(119) a. ʔaksəm gənanəmida nəmuk^w...
 ʔak-sm gn-_wanm=i=da n̄m-uk^w...
 bad-ADJ young-person=3DIST=DET one-person...
 “One is a bad child...”

b. ...ʔik gənanəmida nəmuk^w
 ...ʔik gn-_wanm=i=da n̄m-uk^w
 ...good young-person=3DIST=DET one-person
 “...the other is a good child.”

(120) ʔixʔəmxdas gənanəma
 ʔik=ʔm=xd=a=s gn-_wanma
 good=VER=RPAST=QUES=2 young-person
 “Were you a good kid?”

(121) λumuḥ ʔik ʔədaqḥ Naomi
 λum=uḥ ʔik ʔdaq=uḥ Naomi
 very=3MED good woman=3MED Naomi
 “Naomi is a very kind woman.”

In one instance, I encountered this construction with a color term:

(122) *Context: I was playing a memory game with my eyes closed, and a speaker had directed me to pick up the card with a red crab on it. I did not manage to do so.*

kiʔsuḥ nəqa, ʔax^wʔstu siḥəmuʔs daxʔicuʔ
 kiʔs=uḥ nqa, ʔaq^w-ʔstw siḥm=uʔs da-xʔid-sw̄
 not=3MED correct, red-eye snake=2POSS take.in.hand-CHANGE-PASS
 “That’s not right; what you picked up was a red snake.”

I have also encountered *bəg^wanəm* (“man, male person”) used in the same or similar construction (123).

(123) *Context: A storyboard in which a little chicken is looking for its mother, but keeps finding the wrong animals. At the end, the little chicken finds a chicken, but it's a rooster rather than a hen.*

bəg^wanəm qaqoʔowən
 bk^w-_wanm qaqʔu=n
 man-person chicken=1
 “I’m a rooster!”

Note, however, how the first-person enclitic =*n* does not appear in second position in (123), which, given the enclitic positions in (121) and (120), we might expect, suggesting that it may just be that this is a noun-noun compound (that is, N+N=N) rather than a complex noun phrase (N+N=NP).

3.5 Discourse-level evidence

The argument that Wakashan words (as opposed to roots) lack word classes is based largely on predicate/argument flexibility, of the sort most clearly exhibited in examples like (59-60) and (61-64). A consequence of this argument is that it should make no difference whether a verbal or nominal stem is chosen as the predicate, since the grammar does not distinguish between the two.

However, on further investigation, it does seem to matter which stem is chosen as the predicate. Although pairs like those in (61-64) appear to be truth-conditionally equivalent, they are not actually interchangeable in discourse.

Whereas an answer like (124b) is a felicitous response to either “What is the cat doing?” or “Who is snoring?”, the answer in (124c) is only felicitous in response to “Who is snoring?” That is, the answer with the nominal predicate is felicitous only in that discourse context where the nominal is focused (cf. Koch, 2008).

(124) *Context: I have several noisy animals making various sounds.*

a. ʔəng^wuǰda ǰəntalaǰ
 ʔng^w=uǰ=da ǰnt-ka-l=(a)ǰ
 who=3MED=DET snore-sound-ONGOING=VIS
 “Who is snoring?”

- b. ✓ **ǰǎntaluǰda** **busiǰ**
ǰnt-ka-l=uǰ=da busi=ǰ
snore-sound-ONGOING=3MED=DET cat=VIS
“The cat is snoring.”
- c. ✓ **busiuǰda** **ǰǎntalaǰ**
busi=uǰ=da ǰnt-ka-l=(a)ǰ
cat=3MED=DET snore-sound-ONGOING=VIS
“The cat is snoring.”
- (125) a. **wǰgiluǰda** **busiǰ**
wǰ-gi-l=uǰ=da busi=ǰ
what-do-ONGOING=3MED=DET cat=VIS
“What is the cat doing?”
- b. ✓ **ǰǎntaluǰda** **busiǰ**
ǰnt-ka-l=uǰ=da busi=ǰ
snore-sound-ONGOING=3MED=DET cat=VIS
“The cat is snoring.”
- c. ✗ **busiuǰda** **ǰǎntalaǰ**
busi=uǰ=da ǰnt-ka-l=(a)ǰ
cat=3MED=DET snore-sound-ONGOING=VIS
“The cat is snoring.”

The same pattern is seen in (126-127); when *dǎnǰǎla* (“sing”) is the predicate, the answer is felicitous in response to both questions; when *ǰaya* (“younger sibling”) is the predicate, it is felicitous only in that context in which *ǰaya* is the focus.

(126) *Context: Two brothers are performing at a talent night, one of whom will sing and one of whom will dance. Out in the lobby, someone asks what’s going on onstage.*

- a. **ʔǎng^wida** **dǎnǰǎle??**
ʔng^w=i=da dnǰ-la=a?
who=3DIST=DET sing-ONGOING=INVIS
“Who is singing?”

- b. ✓ dənǰəlida c̣aʔa
 dnǰ-l=i=da c̣aʔa
 sing-ONGOING=3DIST=DET younger.sib
 “The younger brother is singing.”
- c. ✓ c̣aʔida dənǰəleʔ
 c̣aʔ=i=da dnǰ-la=aʔ
 younger.sib=3DIST=DET sing-ONGOING=INVIS
 “The younger brother is singing.”
- (127) a. ẉigilida c̣aʔaʔ
 ẉi-gi-l=i=da c̣aʔa
 what-do-ONGOING=3DIST=DET younger.sib
 “What is the younger sibling doing?”
- b. ✓ dənǰəlida c̣aʔa
 dnǰ-l=i=da c̣aʔa
 sing-ONGOING=3DIST=DET younger.sib
 “The younger brother is singing.”
- c. ✗ c̣aʔida dənǰəleʔ
 c̣aʔ=i=da dnǰ-la=aʔ
 younger.sib=3DIST=DET sing-ONGOING=INVIS
 “The younger brother is singing.”
 Speaker comment: “I think *c̣aʔa* is in the wrong position.”

We find the same asymmetry in more complex sentences, as well, that are not simple “inversions” of subject and predicate:

(128) *Context: A waiter comes to the table to see what you want to drink.*

- a. ṃac̣aliʔs ʔəǰʔeǰsdəsəwəʔoʔs
 ṃac̣al=iʔ=s ʔǰ-ʔeǰsd-sẉ=a=uʔs
 what=3PROX=2POSS do-want-PASS=INVIS=2POSS
 “What do you want?”
- b. ✓ ʔəǰʔeǰsdən ǰa ẉap
 ʔǰ-ʔeǰsd=n ǰa ẉap
 do-want=1 ACC water
 “I want water.”

- c. ✓ **w**apən ʔəʔʔeʔsdəsəwəʔ
 wap=n ʔʔ-ʔeʔsd-sw=εʔ
 water=1 do-want-PASS=INVIS
 “I want water.” (Lit: “That wanted by me is water.”)

(129) *Context: A waiter comes to the table with glasses of water.*

- a. ʔəng^wi da ʔəʔʔeʔsdeʔ ʔa wap
 ʔng^w=i da ʔʔ-ʔeʔsd=εʔ ʔa wap
 who=3PROX DET do-want=a=INVIS ACC water
 “Who wants water?”

- b. ✓ ʔəʔʔeʔsdən ʔa **w**ap
 ʔʔ-ʔeʔsd=n ʔa wap
 do-want=1 ACC water
 “I want water.”

- c. ✗ **w**apən ʔəʔʔeʔsdəsəwəʔ
 wap=n ʔʔ-ʔeʔsd-sw=εʔ
 water=1 do-want-PASS=INVIS
 “I want water.” (Lit: “That wanted by me is water.”)

Again, when a nominal is chosen as the sentential predicate, the sentence is only felicitous in response to a particular question, while a verbal predicate is compatible with either question.

It should be emphasized that it is not just that the sentences have *different* focus interpretations. If, for example, the predicate *always* had to be the focus, we could still maintain acategoriality. What motivates categoriality here is that the possible focus interpretations are, in addition, *asymmetrical*; verbal predicate sentences have possibilities for interpretations that nominal predicate sentences do not.

Similar question-answer pairs involving nominal and adjectival predicates, seen in §6.5.2, can likewise establish that nominal and adjectival predicates have different effects on focus interpretation, providing another source of evidence that Kwak’wala grammar treats nouns and adjectives differently.

We will also see a similar pattern when we examine association-with-focus in §7.2.4. Although some focus-sensitive operators exhibit strict restrictions on association, the second-position enclitic sequence =ʔm=ʔa, meaning “also”, can associate with any element of its sentence. However, when a nominal predicate is chosen rather than an available verbal predicate, the interpretation of the additive is constrained in the same asymmetric manner as seen above.

As noted in §1.8, the sorts of discourse felicity judgments seen in (124-125) and (128-129) are not always reliably given – consultants sometimes just accept any sentence that offers the appropriate information, regardless of its information structure. However, when consultants *do* offer judgments, rather than just accepting anything, the judgments follow the pattern above. I would be hesitant to rely solely on such occasional judgments, were they at odds with elicited and naturalistic data, but the same patterns hold for both elicited and naturalistic speech.

Sentences with marked nominal predicates are almost never offered in elicitation and translation tasks unless the prompt is a particular question. For example, I could not elicit the sentences in (61b), (62b), (63b), and (64b) until I set up appropriate contexts that included the correct questions (i.e., “Who is that smart one?”, “Who is that woman?”, etc.)

In more free communicative tasks, like the “Find-the-Difference” picture task (§1.8), verbal predicates were used in a wide variety of discourse contexts, whereas the use of nominal predicates (when a verbal predicate was also available) has invariably been in contexts where the nominal was in focus.

(130) *Context: The speaker is looking at a “Find-the-Difference” puzzle: two cartoon drawings depicting a picnic scene where some details differ between the pictures. The speaker has been asked to find all the differences and explain them.*

a. **ǰʷawinaga** kʷała laǰga loʔsix
ǰʷawina=ga kʷ-ala l=(a)ǰ=ga λxʷ-ʔs=iX
raven=3PROX sit-ONGOING.POS PREP=ACC=3PROX stand-outdoors=VIS.3PROX
“‘There’s a raven sitting in this tree.” (Lit: “This sitting on this tree is a raven.”)

b. **dəxdəxəlilxga** kʷała laǰga nəmX loʔs
dxdxlilx=ga kʷ-ala l=(a)ǰ=ga nım=x λaǰʷ-ʔs
owl=3PROX sit-ONGOING.POS PREP=ACC=3PROX one=VIS.3PROX stand-outdoors
“‘There’s an owl sitting in the other tree.” (Lit: “This sitting on this other tree is an owl.”)

In “Find-the-Difference” tasks, constructions like these were never used except when the nominal was in focus. Sentences with verbal predicates, on the other hand, were used in a wide variety of focus contexts – not just in cases when the verb or VP was in focus.

One final and interesting judgment suggests to me that this phenomenon does indeed depend on some formal property of the word, such as word class, rather than depending on the semantic referent of the word.

As detailed in §B.3.4, Kwak’wala has a wide variety of “voice” suffixes that can be added to an eventive root to denote some participant in the event, from general notions like patient

and instrument to more specific things like materials, clothing, containers, and surfaces. Some of these suffixes, like the passive *-səw' / -suʔ*, are probably verbal in nature, whereas others (like those denoting specific objects) are more likely nominal derivations.

The result nominalizer *-_wək^w*, listed by Boas (1911) among the “nominal suffixes” and labeled the “passive past participle”, creates words that refer to the results of actions of creation and transformation (§B.3.4.4).

- (131) a. *kadək^w*
kət-_wk^w
 write-PART
 “letter, something written”
- b. *xəldək^w*
xlt-_wk^w
 saw-PART
 “something sawed”
- c. *subək^w*
sup-_wk^w
 chop-PART
 “something chopped”
- d. *həmdzək^w*
hms-_wk^w
 pick.berries-PART
 “berries that have been picked”
- e. *ləğək^w*
lq-_wk^w
 make.berry.cakes-PART
 “berry cakes”

The resulting words generally occur within DPs, so out of curiosity I attempted to use one as a main predicate:

- (132) ?? *subək^wida* *ləq^wa*.
sub-_wk^w=i=da *lq^wa*
 chop.with.axe-PART=3DIST=DET firewood
 Intended: “The wood was chopped.”

The speaker rejected this sentence entirely until, after some reflection, decided there was only one situation in which it sounded okay: when a person is wondering how the wood was split (was it chopped? ...split? ...sawed? etc.), and another person responds with (132) to say that it was chopped.

I have only one use of a participial form used as main predicates in more spontaneous discourse, coincidentally the same word. It likewise exhibits a contrast centering around “chopped”; the speaker was contrasting a group of chopped-down trees and a group of unmolested trees.

(133) *Context: The speaker is pointing at a grove of trees in a picture. The speaker then points to a collection of stumps elsewhere in the picture.*

a. $hemasida$ $\lambda i? \lambda a? s$
 $he=?m=as=i=da$ $\lambda \acute{y}-\lambda-hs$
 be.3PROX=VER=PRSNTV=3PROX=DET REDUP-long.thing.stands-on.ground
 “There are trees.”

b. $si?subək^wida$ $\lambda i? \lambda a? s$
 $s\acute{y}-sup-wk^w=i=da$ $\lambda \acute{y}-\lambda-hs$
 REDUP-chop-PART=3PROX=DET REDUP-long.thing.stands-on.ground
 “Those trees were chopped.”

That is, this word *subək^w*, which takes an apparently nominal suffix, exhibits the same restriction on possible focus interpretations that a nominal predicate does. Meanwhile, the passivized verbal form *supⁱicu?* (“was chopped”), although roughly synonymous, does not seem to induce a restriction on interpretation. For example, here it is used in an apparentlythetic sentence; another speaker on another occasion is looking at the same picture, but does not seem to be contrasting the trees with anything.

(134) *Context: A speaker is describing the collection of stumps.*

$supisəwida$ $yudəx^w \acute{q}^wə\check{x}$
 $sup-x?id-s\acute{w}=i=da$ $yudx^w \acute{q}^w\check{x}$
 chop-CHANGE-PASS=3PROX=DET three tree
 “Three trees were chopped.”

These examples in (132-134) also suggest that it is the predicate being nominal, rather than the argument being verbal, that constrains focus interpretation; these are all sentences with ordinary noun phrases as arguments.

3.6 Summary

The claim that Wakashan languages lack any noun/verb distinction, while widespread in the non-specialist linguistic literature, is somewhat of a simplification of the actual claims in the Wakashanist literature (§3.2). The observations of Wakashan acategoriality from the structuralist era were primarily claims about argumenthood and predicatehood: observations that nouns could be “treated like verbs” (that is, act as predicates) and verbs could be “treated like nouns” (that is, act as predicates); beyond this, Boas (1911; 1947) identified various phenomena that distinguished nouns and verbs.

If we look beyond argumenthood and predicatehood as the primary criteria for word class, a close inspection of Kwak’wala morphology (§3.3) and syntax (§3.4) provide a number of additional examples of phenomena that we can use to establish a three-way distinction between nouns, verbs, and adjectives.

Moreover, interpretational asymmetries like those in §3.5 show that the classic “predicate/argument” pairs invoked by Swadesh (and many sources since then) do not provide such a strong argument for Wakashan acategoriality: such pairs, although striking when viewed in isolation, are not interchangeable; nominal predicates restrict focus interpretation in a way that verbal and adjectival predicates do not.

Given that the classic examples of noun/verb interchangeability do not result in genuinely equivalent sentences, and that many of the morphological elements that appear to be class-insensitive can be shown in other contexts to act like enclitics, which we do not expect to be class-sensitive, there is actually not very much left that we can point to as an argument *for* Kwak’wala acategoriality. In every morphosyntactic context – as bases for affixation, as predicates, as heads of arguments, as modifiers of arguments – we can observe distributional and/or interpretational differences between nouns and verbs, and a few of these suggest an additional class of adjectives as well.

Chapter 4

Copular sentences

4.1 Introduction

4.1.1 The search for copulas

The picture of the Wakashan languages that we inherit from the structuralist period is one with almost complete freedom of predication: that any open-class lexical item can be a predicate without the addition of any sort of **copula** (i.e., a word that functions as “be”) required:

As in other languages that lack the defining verb ‘to be’ (as in ‘it is a man’), the distinction between noun and verb offers difficulties, because every noun may also be predicative” (Boas et al., 1947, p. 205).

It is certainly true that nouns, verbs, and adjectives can serve as sentential predicates without a copula (Chapter 3), but these do not exhaust the predicative possibilities of language, and do not exhaust the environments in which copulas occur. When we extend the search for a copula beyond nominal, verbal, and adjectival predicates, we find that Kwak’wala does have copular elements: specifically, *nugwa-*, *su-*, *ga-*, *yu-*, and *he-* and a few special-purpose copulas.

Although “copula” can be defined in a number of ways depending on one’s formal framework, the basic notion of copula (literally “that which joins” in Latin) is that it is a sentential element that joins a subject and predicate together. In particular, we find copulas when a phrase that cannot itself act as a predicate (“tall”, “a fisherman”, “the winner”, “in Vancouver”, etc.) nonetheless appears to serve as the predicate of the sentence.

- (135) a. *He tall.
 b. He is tall.

Basic copulas	<i>nugwa-</i>	1st person
	<i>su-</i>	2nd person
	<i>ga-</i>	3rd person proximal
	<i>yu-</i>	3rd person medial
	<i>he-</i>	3rd person distal
Special copulas	<i>hig-</i>	exclusive
	<i>wi(d)</i>	interrogative
	<i>kəyos</i>	negative existential

Table 4.1: Kwak’wala copulas

- (136) a. *He a fisherman.
b. He is a fisherman

- (137) a. *He the winner.
b. He is the winner.

- (138) a. *He George.
b. He is George.

The apparent uniformity in English between the examples in (135-138), however, is misleading. Some of these sentences are **equative** like (137) and (138), and express that two entities are the same entity; others are **predicative** like (135) and (136), and express that an entity is one of a set (e.g., the set of tall people, the set of fishermen).

If we were to restrict ourselves to examining sentences like (135-136) in Kwak’wala, then there is indeed no element equivalent to “is” in such sentences. (That is to say, there is no *predicative* copula.) However, when we examine sentences like (137-138) in Kwak’wala, we find that these sentences do take a special “is”-like element – an *equative* copula – and show a very different structure than the ordinary predicative sentences seen in Chapter 2, Chapter 3 and Appendix B.

4.1.2 A variety of copulas

In this chapter, I will examine a variety of sentences that do not fit the basic “predicative” sentence pattern, but exhibit a rather different morphosyntactic pattern, and suggest that there are actually a number of copulas in the language (Table 4.1).¹

Various authors, including Boas et al. (1947), Anderson (1984), Sherer (2014), and even

¹I suggest in §4.3.7, however, that the English copula and the Kwak’wala copula have different functions and different structural positions, so for some definitions of “copula” the Kwak’wala copula might not count.

Hall (1888a), find morphosyntactic abnormalities in sentences that begin with these elements, and I will show in this chapter that they have distinctive morphology and structure.

4.1.3 Types of copular sentences in Kwak’wala

There are two basic types of copular sentence in Kwak’wala.

“Type I” copular sentences express the identity of two entities, like the identity of *Hannah* and *Juliet* in (139a), of *Sally* and =*ən ʔəbəmp* (“my mother”) in (139b), and of =*s* (“you”) and *kəpidsuʔ* (“[the one that] was cut”) in (139c).

- (139) a. *yuʔəm* *Julietuǰ* *Hannah*
 yu=ʔm *Juliet=uǰ* *Hannah*
 be.3MED=VER Juliet=3MED Hannah
 “Hannah is Juliet.”
- b. *hemən* *ʔəbəmpi* *Sally*
 he=ʔm=n *ʔbmp=i* *Sally*
 be.3DIST=VER=1POSS mother=3DIST Sally
 “Sally is my mother.”
- c. *suʔəm* *kəpidsuʔs*
 su=ʔm *kp-xʔid-sw=s*
 be.2=VER scissor.motion-CHANGE-PASS=2
 “You were the one who was cut [got a haircut].”

The above type of copular sentence I will call a “Type Ia” copular sentence or a “canonical” equative copular sentence, and I will investigate them in detail in §4.2. Note that when an element is verbal, like *kəpidsuʔ* (“was cut”) in (139c), the other element is identified with its subject role (the one that got cut). That is to say, this appears, except for its lack of determiners, to behave like an ordinary Kwak’wala relative clause.

There is also a variation of this type, in which the elements appear to occur in a different order, which I will term the “Type Ib” copular sentence or “cleft” equative copular sentence.

- (140) *yuduǰ* *Pateǰ* *nəpidsəwa*
 yu=d=uǰ *Pate=q* *np-xʔid-swə*
 be.3MED=DET=3MED Pat=VIS throw-CHANGE-PASS
 “It’s Pat that you hit.”

Although the constituent ordering is different – the nominative DP (=x *Pateĭ* , “Pat”) comes second rather than last – this also shows the hallmark of the “Type I” copular sentence, in that one element (*uĭ Pateĭ*) is interpreted as coreferent with the subject of the other (*nəpidsəwá*, “was hit”). I will examine these sentences in more detail in §4.3.

The other type of copular sentence does not follow the “subject” rule. In these sentences, which I term “Type II”, the one element is interpreted as coreferent with a *locative* argument of the other, or one of a few other arguments that Kwak’wala treats like locations (times, measures, and standards of comparison).

- (141) heda gayuĭi da nəʔange
 he=da gayuĭ=i da nəʔ-nge
 be.3DIST=DET be.from=3DIST DET REDUP-mountain
 “It comes from the mountains.”

(Rough lit: “The mountains are where it comes from.”)

(Goodfellow et al., 1991, p. 29)

I look at these sentences in more detail in §4.4. Unlike Type I sentences, which play a role in focus expression, these Type II sentences will not play any important role in the chapters that follow, but it is nonetheless valuable to isolate them as a distinct sentence type. Just as the conflation of predicational and copular sentences has confounded analyses in the past, the conflation of Type I and Type II copular sentences can confound the analysis of Type I sentences.

4.2 Type Ia copular sentences: canonical equatives

4.2.1 Predication vs. equation

At least as early as Russell (1919), it was acknowledged that there were two critically different logical senses of “to be”, one of which serves to assert that an entity is part of a set (predication), the other of which serves to assert that an entity is identical to another entity (equation).²

- (142) a. **Equative sentences** are those sentences that assert that one entity is identical to another (“Clark Kent is Superman”, “Hannah is the tallest”, “Darth Vader is Luke’s father”, etc.).

- b. **Predicative sentences** are those sentences that assert that an entity is the member

²This distinction is expressed in a wide variety of ways in the linguistic literature; like “focus” (§1.6.2), authors use many different terms, or use the same terms referring to subtly different distinctions (den Dikken, 2006, p. 295–304).

of a set (“Clark Kent is a reporter” asserts that Clark Kent is a member of the set of reporters, “Hannah is tall” asserts that Hannah is a member of the set of tall things, etc.).

Russell himself seems to have assumed human language did not distinguish the two – he called it “a disgrace to the human race that it has chosen the same word *is* for those two such entirely different ideas as predication and identity” – but there are nonetheless many languages that distinguish these more overtly than English does, including Hebrew (Rapoport, 1987, p. 27), Russian (Reeve, 2010), Turkish (Baker, 2003), and Sakha (Baker and Vinokurova, 2010, 2012). In the Pacific Northwest, two Wakashan languages have been shown to distinguish these, Nuuchahnulth and Makah (Davidson, 2002), and Lyon (2013) demonstrates this difference in Okanagan Salish.

4.2.2 Predication vs. equation in Kwak’wala

If we examine equative sentences in Kwak’wala, we find that they have one of five special elements at the beginning, *nugwa-*, *su-*, *ga-*, *yu-*, and *he-*, and have markedly different syntax and morphology than basic predicative sentences.

(143) a. $\acute{c}\acute{a}d\acute{a}q\acute{i}$ Ayoko
 $\acute{c}d\acute{a}q=i$ Ayoko
 woman=3_{DIST} Ayoko
 “Ayako is a woman.”

b. *Context: Three men are present, and one woman.*

$y\acute{u}?\acute{o}m$ $\acute{c}\acute{a}d\acute{a}q\acute{u}\check{x}$ Ayoko
 $y\acute{u}=?m$ $\acute{c}d\acute{a}q=u\check{x}$ Ayoko
 be.3_{MED}=VER woman=3_{MED} Ayoko
 “Ayako is the woman.”

(144) a. *Context: A child is talking about what she’s going to be when she grows up.*

$ki\lambda^i\acute{i}nu\check{x}^w\lambda\acute{e}n$
 $ki\lambda^i\acute{i}nu\check{x}^w=\lambda^i=\acute{e}n$
 catch.fish-expert=FUT=1
 “I’m going to be a fisherman.”

4.2.3 Word order

In the basic equative sentence, the elements come in a particular order:

- First, the copula, *nugwa-*, *su-*, *ga-*, *yu-*, or *he-*.³ (§4.2.4).
- Optionally, but very frequently, the enclitics =*ʔm* or =*d(a)* (§4.2.7)
- The copular complement (§4.2.6)
- Finally, a nominative DP (§4.2.5)

There is also a second word order – what I term a “Type Ib” or “cleft” copular sentence – that also occurs, in which the subject comes directly after the copula and its enclitics, and the remainder of the sentence – what would otherwise be the copular complement – follows. These are not, however, a straightforward rearrangement of the constituents of the Type Ia copular sentence; there are some morphological and syntactic differences that I consider in §4.3.⁴

4.2.4 The copula

The first element in an equative sentence – what I have been calling a copula – is neither a predicate (§4.2.9) nor a pronoun (§4.2.4), but an element with a distribution unlike either. Like the pronouns and subject enclitics, however, the copulas occur in a five-way person/deixis paradigm, with first person (§147a), second person (147b), third person proximal (147c), third person medial (147d), and third person distal (147e).

³These are traditionally described as “pronouns” (Boas et al., 1947) or “demonstrative predicates” (Anderson, 1984).

⁴For completeness, I should also note that very occasionally I encounter an order in which the subject seems to appear within the copular complement.

- (i) *higaʔəm gəx^wi Hannah loʔ*
hig=ʔm g^x=i Hannah loʔ
 only=VER help=3DIST **Hannah** ACC.2
 “**Hannah** was the only one that helped you.”

- (ii) *higaʔəm hiʔqoləmida q^wiʔq^wəlyak^waǵeʔ ǵəlqa laǵa wənqəla*
hig=ʔm hiʔ-qolm=i=da q^wǵ-q^wls-_wak^w-aǵaǵ ǵlqa la=ǵa wənq-la
 only=VER correct-??=3DIST=DET REDUP-old-more swim PREP=ACC deep-ONGOING
 “Only **adults** are allowed to swim in the deep end.”

However, these are very rare – I have only encountered two clear examples in over a thousand copular sentences that I have collected – and I am not certain they represent a genuine third possible order, rather than just being speech errors, sentences in which the speaker has changed their mind about the structure midway, or utterances consisting of more than once sentence. When I construct one, they are sometimes accepted and sometimes rejected, but when I construct one and ask the speaker to repeat it back to me, they invariably “correct” it to one in which the subject comes in its usual “clefted” position.

- (147) a. **nug^waλi** Hamlet
nug^w=(a)λ=i Hamlet
be.1=FUT=3DIST Hamlet
 “I’m going to be Hamlet.”
- b. **su^məʔən** ʔəbəmps
su=ʔm=a=n ʔbmp=s
be.2=QUES=VER=1POSS mother=2
 “Are you my mother?”
- c. **ga^mən** ʔixʔageʔ
ga=ʔm=n ʔixʔak-_way
be.3PROX=VER=1POSS like-NMZ
 “This is the one that I like.”
- d. **yuʔəm** Superman^ǰ Masaki
yu=ʔm Superman=u^ǰ Masaki
be.3MED=VER Superman=3MED Masaki
 “Masaki [over there] is Superman.”
- e. **heʔəm** dulowi Hannah
he=ʔm dulow=i Hannah
be.3DIST=VER win=3DIST Hannah
 “Hannah [currently absent] is the winner.”

The third person distal copula has a somewhat unusual vowel quality, and is transcribed in a wide variety of ways. Hall (1888a) transcribes it as *hī*, Boas and Hunt (1905) often transcribe it as *hē*, using a vowel they do not otherwise use frequently, Shaughnessy (Dick and Shaughnessy, 1977) chooses *ha*, and Anderson (1984) chooses *hi*. Nicolson (2013) transcribes it as *he*’, with a glottal stop at the end.⁵

There is also an exclusive version of the copula, meaning something like “is the only one”, *hig-*, which shares the same syntax as *nugwa-*, *su-*, *ga-*, *yu-*, and *he-*. This element will be explored in greater detail in §7.3.2, but a few examples in the following sections will be illustrated with *hig-* as well.

Boas (1947) first grouped the five basic copulas (*nugwa-*, *su-*, *ga-*, *yu-*, and *he-*) together as a class and noted their isomorphism with the prenominal/pronominal series, and called them

⁵I think it is very plausible that there be a glottal stop somewhere in the underlying form, or it is underlyingly one of the vowel combinations (like /aa/) that surfaces with a glottal component.

the “verbal series of independent pronouns”.

	Person/Location	Predicate	Prenominal equivalent
	1	/nugwa/	/=ən/
	2	/su-/	/=as/
(148)	3rd proximal	/ga-/	/=ga/
	3rd medial	/yu-/	/=uǰ /
	3rd distal	/he-/	/=i(?)/

He provided an example paradigm in (149). The structure of the sentences in (149) appeared to be one in which *Siwid* is an argument and *nugwa-*, *su-*, *ga-*, *yu-*, and *he-* are the predicates.

	<i>Nug^waʔəm Siwid</i>	I am Siwid.
	<i>Suʔəm Siwidəs</i>	You are Siwid.
(149)	<i>Gad Siwidək</i>	He here is Siwid.
	<i>Yud Siwiduǰ</i>	He near you is Siwid.
	<i>Hed Siwidi</i>	He near him is Siwid.

This distribution was troubling to Boas, because Kwak’wala otherwise is very consistent about what can and cannot appear in this initial position:

“The first and second persons seem to be built up of *n* for the first and *s* for the second, an element *o*, and for the first person, the suffix *ga* (after *o*, *gwa*). It seems, however, quite against the spirit of the language that *n* and *s* should appear as stems in first position.” (Boas et al., 1947, p. 257)

That is to say, a series of apparent pronouns is appearing in a clausal position that only predicates should occupy.

It should be noted, however, when we call these “verbal pronouns” or “pronominal predicates”, that these are not (except in one instance, *ga-*) the same material as other “pronouns”, and they do not occur in argument positions. “Pronoun” is not used here in the original sense, of something that can stand in the place of a noun (or rather, in place of what we would now call a “determiner phrase”). This stands in contrast to pronoun-like equative elements in other Northwest languages, such as Straits Salish (Shank, 2003) or St’át’imcets (Lillooet Salish) (Thoma, 2009), which can be shown in other contexts to act as ordinary pronouns, as well as other languages such as Hebrew, where the equative copula is identical to the third person nominative pronouns (Rapoport, 1987, p. 34).

Attempting to use one of the Kwak’wala “verbal pronouns” in an ordinary pronominal position (such as an argument to a verb or complement of a preposition) leads to ungrammaticality:

- (150) čow =ən/*nugwa =ǰa =s(a) =uǰ/*yu l=(a)ǰ(a) =uǰ/*yu.
 give =1 =ACC =OBL =3DIST PREP=ACC =3DIST
 ‘I gave that to her.’

I think it is likely that these elements are historically derived from pronouns or pronoun-like elements (§4.2.9), but we should be careful to distinguish these elements from what is normally meant by “pronoun”.

One of the reasons the pronoun analysis is tempting is that many equative sentences do not have two full overt arguments, like the sentence in (151).

- (151) yuǰuǰda wəqεsəǰ
 yu=ǰm=uǰ=da wqεs=q
 be.3MED=VER=3MED frog=VIS
 “Those are the frogs.” (Boas and Hunt, 1905, p. 173)

In the absence of an identifiable “those” (or “he”, “she”, “it”, “me”, “you”, etc.) in sentences like (151), it is tempting to take the mysterious element of the sentence (here, *yu-*) and say that it means “those”.

However, when we consider sentences with an overt pronoun like (152), this analysis is less compelling, since there is already something that would correspond to “that” (namely, =*uǰ*).⁶

- (152) yuǰəm qayasǰ
 yu=ǰm qas-*w*as=uǰ
 be.3MED=VER walk-PLACE=3MED
 “**That** is the path/road/route.”

When we consider equative sentences with two full arguments like those in (153) and (154), the “pronominal” analysis becomes strained. The reason for proposing it in the first place was that they seemed to correspond to English pronoun subjects in many sentences, but there is no pronoun in the following English sentences, nor any need for one.

- (153) *Context: Speakers are indicating relationships between them.*

hemən	nəg ^w əmpi	ǰəbəmpεǰs	Georgepay
he=ǰm=n	nk ^w - <i>w</i> mp=i	ǰbmp=a=aǰ=s	Georgepay
be.3DIST=VER=1POSS	in.law-relation=3DIST	mother=a=INVIS=3POSS	Georgepay

“Georgepay’s mother is my mother-in-law.”

⁶It is important to note the difference between the endings of (151) and (152). In (151), the =*ǰ* at the end is the visible postnominal enclitic. In (152), the =*uǰ* is the third-person medial pronominal, functioning here as a pronoun.

(154) *Context: A passage from a text giving a speaker's family history.*

hamisən ʔompida çayeʔ
 he=ʔm=is=n ʔump=i=da çaya=aʔ
 be.3DIST=VER=and=1 father=3DIST=DET younger.brother=INVIS
 “My father was the younger brother.” (Dick and Shaughnessy, 1977, p. 92)

I should also note that these are not “emphatic” or “focus” pronouns, either, used instead of the ordinary pronouns when the pronoun is focused. These elements are, it is true, very frequent in focus constructions, and it may seem at first that, for example, *nugwa-* occurs when the first person is a focus and *=n* occurs when the first person is not a focus. However, it is certainly possible to have sentences in which *=n* expresses a focused first person, like in (155).

(155) higaṁən naqa ʃa kafi ʃa gəʔala
 higa=ʔm=n naqa ʃa kafi ʃa gʔ-ala
 only=VER=1 drink ACC coffee ACC early-ONGOING
 “I’m the only one who drinks coffee in the morning.”

We can also naturally extend the arguments given above, against a pronominal analysis of copulas, to an analysis where they are focus pronominals. In (156b), the focus is *=i Sean*; just as there is no need for a pronoun in this sentence (since all of the arguments are fully specified), there is also no need for a *focused* pronoun.

(156) a. ʔəngʷəs xʷənukʷeʔʔ
 ʔngʷ=s xʷnukʷ=a=aʔ
 who=2 child=a=INVIS
 “Who’s your son?”

b. heṁən ʃʷənukʷi Sean
 he=ʔm=n ʃʷnukʷ=i Sean
 be.3DIST=VER=1POSS child=3DIST Sean
 “Sean is my son.”

Finally, it is worth noting that, while these elements occur frequently in clefts, they are not themselves just “clefting particles” or “focusing particles”, in the sense that they indicate that a particular constituent is focused. The presence of *he-* in (156b) does not pick out any particular constituent as focused; the same sentence could be used when a different constituent is the focus, as in (157b).

- (157) a. λιλιλαλολαρ̂ase λəw̄i Sean?
 λι-λιλαλολα-ρ̂a=s=i λw̄=i Sean
 REDUP-RELATIVES-RECIP=2=QUES and=3DIST Sean
 “Are you related to Sean?”
- b. heṁəṁ ǰw̄ənukw̄i Sean
 he=?m=n ǰw̄nukw̄=i Sean
 be.3DIST=VER=1POSS child=3DIST Sean
 “Sean is **my son**.”

So while many sentences with foci, and many sentences specifically expressing foci, contain these elements, saying that they themselves are focus pronouns does not really capture their distribution.

4.2.5 The copular subject

In contrast to the ordinary “predicate” sentence order, in equative sentences the subject appears to be the second of the apparent arguments. While the first element sometimes appears to have normal “subject” determiners, on closer inspection (§4.2.6) its determiners behave rather idiosyncratically; only the last element in the sentence shows the ordinary determiners we associate with subjects.

The copula and the subject exhibit agreement; we can see in (158a) that the *ga-* corresponds to the =*ga Sarah*, in (158b) that the *yu-* corresponds to the =*uǰ Sarah* and in (158c) that the *he-* corresponds to the =*i Sarah*.

- (158) a. gaṁəṁ wayasga Sarah.
 ga=m=əṁ wayas=ga Sarah
 be.3PROX=VER=1POSS sweetheart=3PROX Sarah
 “Sarah [right here] is my sweetheart.”
- b. yuṁəṁ wayasuǰ Sarah.
 yu=?m=əṁ wayas=uǰ Sarah
 be.3MED=VER=1POSS sweetheart=3MED Sarah
 “Sarah [over there] is my sweetheart.”

- c. **hemən** wayasi Sarah.
he=m=ən wayas=i Sarah
be.3DIST=VER=1POSS sweetheart=**3DIST** Sarah
 “Sarah [absent] is my sweetheart.”
- (159) a. ✓ **yuduʔs** ẉapuǎ
 yu=d=uʔs ẉap=uǎ
 be.3MED=DET=2POSS water=**3MED**
 “**This [medial]** is your water.”
- b. ✗ **gaduʔs** ẉapuǎ
 ga=d=uʔs ẉap=uǎ
 be.3PROX=DET=2POSS water=**3MED**
 Intended: “**This [medial]** is your water.”⁷

This agreement is what Boas was referring to when he observes, “It is important to note that the third person forms anticipate the noun that may be connected with the following verb and that the noun is given at the end in the demonstrative form agreeing with the demonstrative form of the pronoun [read: copula]” (Boas et al., 1947, p. 259).

In equative sentences, first-person subject enclitics are unexpressed in the singular (160a), but are present in the inclusive (160b) and exclusive (160c) plurals.

- (160) a. **nug^waʔəm ḳəp̣idsəẉa**
 nug^wa=ʔm ḳp-xʔid-sẉa
 be.1=VER scissor.motion-CHANGE-PASS
 “I am the one who got a haircut.”
- b. **nug^waṃənʔs ḳəp̣idsəẉa**
 nug^wa=ʔm=nʔs ḳp-xʔid-sẉa
 be.1=VER=1INCL scissor.motion-CHANGE-PASS
 “**We [inclusive]** are the ones who got a haircut.”

⁷These sentences were constructed, and contain what might be an additional error: they should probably have had =(ə)s rather than =uʔs to represent the second person possessor. We (myself and another elicitor) had not caught the speaker’s use of =əʔs in an earlier sentence, and constructed the follow-up sentences using =uʔs instead. Nonetheless, it is fairly clear that in judging (159b) against (159a), the speaker was responding to the deictic disagreement.

- c. nug^wamənuʔǎ^w kəpidsəwə
 nug^wa=ʔm=nuʔǎ^w kp-xʔid-swə
 be.1=VER=1EXCL scissor.motion-CHANGE-PASS
 “We [exclusive] are the ones that got a haircut.”

In general, any sentence may be missing the subject, and where one would expect a pronominal subject, often is. Like ordinary Kwak’wala sentences, equative sentences may have a full determiner phrase subject (158b), a pronominal subject (161a)⁸, or no (overt) subject at all (161b).

- (161) a. yu^mən wayasuǎ.
 yu=^mən wayas=^uǎ.
 be.3MED=VER=1POSS sweetheart=3MED
 “She [over there] is my sweetheart.”
- b. yu^mən wayas.
 yu=^mən wayas.
 be.3MED=VER=1POSS sweetheart
 “She [over there] is my sweetheart.”

4.2.6 The copular complement

The first of the two equated constituents, what I term the “copular complement”, appears at first to be an ordinary determiner phrase, but on closer inspection has a number of morphological peculiarities, suggesting that it and the subject are not the same syntactic type.

The most obvious difference between a full determiner phrase argument (e.g., a subject or object) and the copular complement is that the copular complement usually lacks a deictic determiner (147d, 147e); where we might expect =*uǎ* or =*i* we find nothing. Deictic determiners only seem to appear when certain other enclitics precede them, including the future tense enclitic and the additive =*ǎa*. We can see this variation clearly in (162a) and (162b), where the determiner only shows up in the future-tense sentence.

⁸The frequent appearance of =*uǎda*, =*ida*, etc. as the subject of copular sentences is what Boas was referring to when he says of =*da* that it “appears in terminal position, particular with demonstratives and the interrogative ‘wy- which?’” (Boas et al., 1947, p. 259).

(162) a. *Context: I have woken up in the hospital and forget who I am. The speaker reminds me...*

suʔəm Pats.
 su=ʔm Pat=s
 be.2=VER Pat=2
 “You’re Pat.”

b. *Context: We are putting on a play and assigning roles.*

suʔəmʕi Romeos
 su=ʔm=ʕ=i Romeo=s
 be.2=VER=FUT=3DIST Romeo=2
 “You will be Romeo.”

When a deictic determiner appears before the copular complement, it is always =*i*, regardless of the person/deictic category of the subject and copula.⁹

Possessive determiners like =*n* (“my”) occur with copular complements (e.g. 158a-158c), but they too show idiosyncrasies. For example, 2nd person possessors appear to be represented with the 2nd person *subject* enclitic =(a)s in sentences like (163a), rather than the 2nd person *possessive* prenominal enclitic =*uʔs*. There are also differences with the third-person possessive forms; whereas arguments possessed by third persons receive =*εʔ* (probably =*a=aʔ* or =*a=a*, as noted in §B.4.4.7) and =*aq* before the possessive =*s*, we can note that here, the =*s* occurs directly on the copular complement.

(163) a. yuʔəms ʕayux̃ Meagan
 yu=ʔm=s ʕay=uʕ̃ Meagan
 be.3MED=VER=2POSS younger.sib=3MED Meagan
 “Meagan is your younger sibling.”

⁹This “disagreement” is not unusual; we can note in other languages, too, that copular complement need not agree with both arguments. Rapoport (1987, p. 66) notes this for Hebrew copulas, which show gender agreement; in the sentence below, the copula agrees with *golda me’ir*, which is feminine, but not *roS-ha-memSala*, which is masculine.

(i) golda me’ir hi roS-ha-memSala
 Golda Me’ir(f) 3sf head(m)-the-government
 “Golda Meir is the Prime Minister.” (Rapoport, 1987, p. 66)

- b. *yuʔəm* *wayasəs* Catherine
yu=ʔm *wayas=s* Catherine
be.3MED=VER sweetheart=3POSS Catherine
‘‘That’s Catherine’s boyfriend.’’

That is, copular complements systematically lack postnominal visibility enclitics.¹⁰ Remarkably, this difference was noticed by Hall (1888a), who expressed the lack of the *a* with an apostrophe. Although he did not tie this lack to syntactic structure, he seems to have recognized that it was not the ordinary form:

‘This is Henry’s house’ is literally in Kwagiutl, ‘this is the house of Henry,’ *gia um giukw’s Henry*. The apostrophe shows that a letter has been elided: written fully it would be *giukw as Henry* (Hall, 1888a, p. 63).

Boas noticed something like this as well, noting that ‘‘Whenever a genitive follows the pronouns [read: copulas] the connective *a* of finite clauses is omitted’’ (Boas et al., 1947, p. 259).

When a complex copular complement like those above is followed by a subject, as in (164a), an *=a* occurs in between them; I gloss this as *EMBED*. As with other instances of /a/ (like the /a/ in additive *=ʔa*) it is usually realized with the ‘‘echo schwa’’ realization before a lowered high vowel (§A.5.3).

- (164) a. *yuʔəm* *ǰənəmsuǰ* *Regisoʔoǰ* Dorothyǰ
yu=ʔm *ǰnm=s=uǰ* *Regis=a=uǰ* Dorothy=q
be.3MED=VER wife=3POSS=3MED Regis=EMBED=3MED Dorothy=VIS
‘‘Dorothy is Regis’s wife.’’

¹⁰This difference proves a conundrum in Chung (2007, p. 105), in which a copular complement is taken to be visible because it lacks a postnominal visibility enclitic: ‘‘Even though the ‘late father’ does not exist in the real world he is visible to the speaker *in the photo* and therefore his visibility is encoded and anchored to the ‘‘postnominal’’ determiner as in...’’

- (i) *hemən* *ʔumpwəli* David
he-ʔm=n *ʔump-wł=i* David
be.3DIST=VER=1POSS father-PAST=3DIST David
‘‘David is my late father.’’

It is not necessary here to say that *=ən ʔumpwəl* here is marked with the (null) postnominal visibility marker and therefore find an explanation for why it is visible; rather, *=ən ʔumpwəl* is not a determiner phrase at all, and would not have a postnominal visibility enclitic regardless.

- b. heʔəm nulasuǎ Dorothyəʔe Edwin
 he=ʔm nula=s=uǎ Dorothy=a=i Edwin
 be.3DIST=VER older.sib=3POSS=3MED Dorothy=EMBED=3DIST Edwin
 “Edwin is Dorothy’s older brother.”

When the copular complement is complex and the subject would only be pronominal, the subject is generally not expressed at all, as in (163b) and (165b).¹¹

- (165) a. heʔəms ʔəbəmpi
 he=ʔm=s ʔb-mp=i
 be.3DIST=VER=2POSS mother-relative=3DIST
 “That’s your mother.” (Powell et al., 1981b, p. 5)

- b. heʔəm ʔəbəmpəs Bill.
 he=ʔm ʔb-mp=s Bill
 be.3DIST=VER mother-relative=3POSS Bill
 “That’s Bill’s mother.” (Powell et al., 1981b, p. 5)

As noted in §4.1.3, when the copular complement has a verbal nucleus, like in (166a) and (166b), the entity expressed is that of its (implicit) subject, just as if *kəpidsuʔ* (“was cut”) and *loʔanəm* (“was received”) were ordinary headless relative clauses.¹²

- (166) a. suʔəm kəpidsuʔs
 su=ʔm kəp-xʔid-sw=s
 be.2=VER scissor.motion-CHANGE-PASS=2
 “You were the one who was cut [got a haircut].” (=139c)
- b. heʔəm loʔanəmsida λaǎʔstu λəwi da ʔigiʔstu
 he=ʔm loʔ-w anm=s=i=da λaqʷ-ʔstu λw=i da ʔik-w is-ʔstu
 be.3DIST=VER get-obtained=3POSS=3DIST=DET red-eye and=3DIST DET good-beach-eye
 “The red and gray thing was what he got.” (Lit: “The red and gray was the one received by him.”)

That is to say, these sentences follow the expected rule of Kwak’wala displaced interpretation: that when an argument is interpreted as a participant in a verb elsewhere in the sentence, it

¹¹Boas et al. (1947, p. 259) have an example that appears to be the 3rd proximal =ga=da used pronominally after a complex complement, but I have not encountered any myself.

¹²Of course, these copular complements differ from ordinary headless relative clauses by their lack of certain pronominal and postnominal determiners, just as the copular complements above differ from ordinary arguments by the lack of these determiners.

is interpreted as that verb's subject (§B.1.2). This is worth emphasizing because the other type of copular sentence – “Type II” – does *not* follow this rule (§4.4).

4.2.7 Enclitic elements

There are two enclitic elements, $=\text{?}m$ and $=d(a)$, that tend to occur after the copula but before any tense enclitics.

While they do not have exactly the same distribution, I have not managed to pin down how (and whether) they differ in meaning. I look at the meaning difference more closely in §8.9, when considering the meaning of $=\text{?}m$ in general, but briefly:

- Both $=d(a)$ and $=\text{?}m$ are frequent in equative sentences with third person subjects.
- $=d(a)$ is very rare with first and second person equative sentences; these tend to use $=\text{?}m$ or nothing.
- $=\text{?}m$ does not occur in negative equative sentences, parallel to its non-appearance in other negative sentences (§8.3.4, §8.4.5).
- $=d(a)$ occurs frequently on any kind of copular sentence, including locative and resemblance copular sentences, whereas $=\text{?}m$ only occurs in non-equative copular sentences when other conditions for the use of $=\text{?}m$ (Chapter 8) are met.
- $=\text{?}m$ and $=d(a)$ do not co-occur; in fact, $=d(a)$ does not seem to occur with any other morphology.
- When the copular complement has first ($=n$) or second ($=s$) person possessive marking $=d(a)$ is not used.

The last of these is especially interesting, in that it is evidence that $=d(a)$ is indeed the same, or has the same origins, as the determiner $=d(a)$. When we observe the element $=d(a)$ in isolation – not in a cleft (§4.3) – where it is followed by a subject enclitic – it appears as $=da$.¹³

(167) heda dulowi Jon
 he=da dulow=i Jon
 be.3DIST=DET win=3DIST Jon
 “Jon is the winner.”

¹³Note, however, the paradigm given by (Boas et al., 1947), reproduced in §4.2.4, has *gad*, *yud*, and *hed* without the following *a*, and moreover with a copular complement that would not, as an argument, take $=da$.

- (168) heda čacədağəmi Marilyn
he=da ča-čdaq-_wam=i Marilyn
be.3DIST=DET REDUP-WOMAN-DIMIN=3DIST Marilyn
“Marilyn is the girl.”
- (169) heda ʔəχʔεχsdəsʊʔseʔeda di
he=da ʔχ-_hεχsd-sw̄=s=a=i=da di
be.3DIST=DET do-want-PASS=3POSS=EMBED=3DIST=DET tea
“Tea was what he wanted.”

Given that =*d(a)* is very common when introducing copular complements that would otherwise be predicative (like *čacədağəm*, “girl”), and at best very rare¹⁴ with copular complements like proper names and possessed DPs that would already be of type ⟨*e*⟩, this =*d(a)* could be a partial answer, then, to the question of where all the missing determiners in copular complements went.

4.2.8 The demonstrative predicate hypothesis

In this section, I examine in more detail an alternative hypothesis about the structure of these sentences, as suggested in Anderson (1984). Rather than posit that *ga-*, *yu-*, and *he-* are copulas with two arguments (a DP subject and a copular complement), as I do here, Anderson describes them as demonstrative predicates meaning “to be this one”, “to be that one”, etc., and describes what follows as the subject of this predicate. This is not worked out in detail in Anderson (1984), but I think it is worth exploring here, since it is a natural initial assumption to make about what these elements are doing and what their structure might be.¹⁵

It also has a certain initial plausibility for Kwak’wala given the existence of WH predicates. English WH words and demonstratives both show the distribution of determiners, Kwak’wala WH words show the distribution of predicates; therefore, by analogy, we might expect Kwak’wala demonstratives to likewise show the distribution of predicates. Anderson therefore assumes a WH-question-like structure (§B.7.2) for these sentences, in which everything that follows the demonstrative predicate is a kind of relative clause, often headless, which acts as the

¹⁴I have encountered very few of these, and I think they may have been priming errors; they occurred in a learning session with beginners (including myself) who had been using *gad*, *yud*, and *hed* for any copular complement. As I note in §8.9, my consultants report that they are basically interchangeable and are unable to describe a meaning difference between them, and will accept either in constructed sentences. However, in the sentences that they produce, there is a striking pattern regarding with which complements this =*d(a)* can appear, and it is similar (if not identical) to the possible complements of the determiner =*da*.

¹⁵Anderson’s description does not include the 1st and 2nd person *nugwa* and *su*, but we could easily extend this account to them.

subject of the predication. However, this analysis runs into various morphological, syntactic, and semantic problems.

4.2.8.1 Missing prenominal enclitics

The morphosyntax of “demonstrative” sentences such as (170b) can differ significantly from the questions they are meant to parallel (170a). In particular, many of the putative subjects seem to lack the appropriate determiners, as described in §4.2.6. If *kanuk^wa* in (170b) were a subject (rather than being a copular complement with a null subject), as, we would expect it to exhibit determiners like any other subject – like, in particular, the subject of (170a) (= *ida kanuk^we?*) with which it is claimed to be parallel.

- (170) a. $\text{ʔəng}^w\text{ida}$ **kanuk^wε?**
 $\text{ʔng}^w=\text{i}=\text{da}$ **ka-nuk^wa=a?**
 who=3_{DIST}=DET **car-have=INVIS**
 “Who has a car?”
- b. $\text{nug}^w\text{aʔəm}$ **kanuk^wa.**
 $\text{nug}^w\text{a}=\text{ʔm}$ **ka-nuk^wa.**
 be.1=VER **car-have**
 “I’m the one with a car.”

Anderson suggests that this is because headless relative clause subjects lack an appropriate AGR head, but we see a relative clause subject in (170a) with exactly the expected determiners. It is also awkward to extend the same reasoning to (171b) – i.e., that *Masaki* lacks determiners because it is a headless relative clause.

- (171) a. $\text{ʔəng}^w\text{u}\check{\text{x}}\text{da}$ **bəg^wanəm?**
 $\text{ʔng}^w=\text{u}\check{\text{x}}=\text{da}$ **bək^w-_wanm?**
 who=3_{MED}=DET man-person
 “Who’s that man?” (Lit: “That man is who?”)
- b. yuʔəm **Masaki.**
 $\text{yu}=\text{ʔm}$ **Masaki.**
 be.3_{MED}=VER **Masaki**
 “That’s Masaki.” (Proposed lit: “Masaki is-that-one.”)

Therefore, something other than being-a-relative-clause is causing the presence or absence of determiners. In my own account, this is because they are entirely different constituents; =*ida*

kanuk^{wε?} is a subject, while *kanuk^{wa}* and *Masaki* are not subjects, but copular complements.

4.2.8.2 Inappropriate postnominal enclitics

Secondly, we find that the putative subject of the demonstrative sentence appears to receive “postnominal” enclitics that it otherwise would not receive – specifically, that it appears to receive in this position the *prenominal* and *subject* enclitics.

- (172) a. *gamən* *wəpɡada*
 ga=ʔm=n *wəp=ga=da*
 be.3PROX=VER=1POSS *water=3PROX=DET*
 “**This** is my water.”
- b. *yuʔəm* *qayasux̃*
 yu=ʔm *qas-_was=ux̃*
 be.3MED=VER *walk-PLACE=3MED*
 “**That**’s the path/road/route.”
- c. *sumən* *ʔəbəmps*
 su=ʔm=n *ʔbmp=s*
 be.2=VER=1POSS *mother=2*
 “Are **you** my mother?”

We cannot take the apparent postnominal =*ga* in (172a) to be the postnominal third-person proximal invisible =*ga?*; even if this enclitic were in common use, the glass of water in question is entirely visible, and *ga* is in any case followed by another prenominal enclitic, the determiner =*da*.

4.2.8.3 DP-internal syntax

Furthermore, the predicative account encounters some word-order difficulties within the putative subjects. If the “demonstrative” is the predicate, and the rest of the sentence is the subject, then some of these subjects would have impossible word orders.

For example, in (173), if we take *he-* to be a predicate and the rest of the sentence to be the subject, the resulting subject (*dulowi Hannah*) would be unlike other determiner phrases in the language, in that the prenominal determiners would be inside, rather than before, the phrase.

(179) *Context: We are discussing an Elvis impersonator.*

hebuła Elvis
he-buła Elvis
be.3DIST-pretend Elvis
“He’s pretending to be Elvis.”

(180) *Context: I think Marion has just about the best life, and wish I were her.*

nug^waniłxsλi Marion
nug^wa-niłxs=λ=i Marion
be.1-wish=EXPR?=3DIST Marion
“I wish I were Marion.”

In these sentences, the meaning that is targeted is the identity meaning rather than the deictic meaning; the resulting meaning is “want to be someone” or “pretend to be someone” rather than “want to be here/there/etc.”, “pretend to be here/there/etc.”. Moreover, the identity claims in these sentences (“Jon is the thief”, “his father is Superman”, “he is Elvis”, “I am Marion”) are not claimed by the sentence as a whole – they do not “project” in the way that we might expect if, say, *Superman* and *=iłs λump* (“his father”) were really in apposition to each other.¹⁶

In other words, the “predicative” structure would suggest the opposite semantic behavior from what we observe: it would predict that the identity component of these sentences is presupposed (or some kind of “supposed”) and the deictic contribution is asserted. This is not what we observe, and in any case would leave a serious expressive gap in the language: if a language’s way of expressing identity projects through negation, then that language would not have any means of *denying* identity.

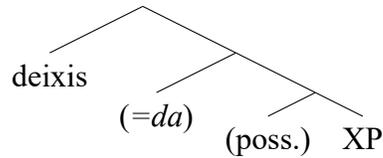
4.2.9 A parallel “spine”

While I argued in §4.2.6 that the copular complement was not itself a DP, it is worth noting the similarity of the [copula+copular complement] to a DP. Given the rough phonological similarity of the copulas to deictic determiners and subject pronouns (Boas et al., 1947, p. 257) – *n* for first person, *s* for second, *g* for third proximal, *u* for third medial, and *i/e* for third distal –

¹⁶I should note that, in sentences that express a desire for identity, pretended identity, etc., speakers hesitate regarding which argument (the desirer/pretender or the other person) should be represented in the copula’s deictic marking, and which arguments should have determiners (§B.4.2.2). It is usually the case that the desirer/pretender/wisher is represented by the copula, as in the sentences above, but not always, and when presented with a novel sentence speakers are reluctant to rule on which person wants to be (or is pretending to be) which. Nonetheless, these sentences are always interpreted as “want to be someone”, “pretend to be someone”, etc., which is sufficient for this argument.

and the similarity of the $=d(a)$ to $=da$, we can observe a potential syntactic “spine” parallel to that of determiner phrases (Chung, 2007) (§B.4.4), except lacking the higher (case) and lower (postnominal visibility) projections.¹⁷

(181)



Given this, I think it is quite plausible that Kwak’wala copular sentences originated as a sequence of two determiner phrases without an overt copula, as we see in some of the Salishan languages (Lyon, 2013), and at some point the initial element of the initial determiner phrase (its deictic determiner) was reanalyzed as being a copula.

It is important to clarify, however, that the two equated elements are not, synchronically, of the same syntactic type. As noted in §4.2.6, the copular complement is missing some determiners (even beyond the reanalyzed deictic determiner) and there are various differences in morphological realizations as well (e.g., $=(a)s$ rather than $=uʔs$, yu rather than $=u\check{x}$, he rather than $=i$, etc.). Moreover, the deictic element in (181) – that is, the copula – does not express the deictic specification belonging to *this* XP; it expresses the deictic specification of the *subject*. For example, in (182) and (183), we would expect that the copular complements should be distal (because they describe future entities), but the deictic element nonetheless agrees with the subject at the end of the sentence.

(182) *Context: We are putting on Romeo and Juliet; I am playing Romeo and am planning that Hannah be Juliet.*

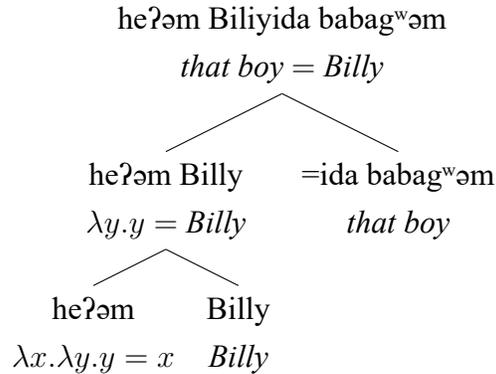
yumən	wayasλuḥ	Hannah
yu=ʔm=n	wayas=λ=uḥ	Hannah
be.3MED=VER=1POSS	sweetheart=FUT=3MED	Hannah
“Hannah will be my sweetheart.”		

(183) *Context: We are discussing a (fictional) future talent competition.*

yuʔəm	dənḥʔinuḥ ^w λuḥ	Ruby
yu=ʔm	dnḥ _{-h} inuḥ ^w =λ=uḥ	Ruby
be.3MED=VER	sing-expert=FUT=3MED	Ruby
“Ruby will be the best singer.”		

¹⁷As in (§B.4.4), I am again uncertain regarding the position of postnominal possessive $=s$ in this tree.

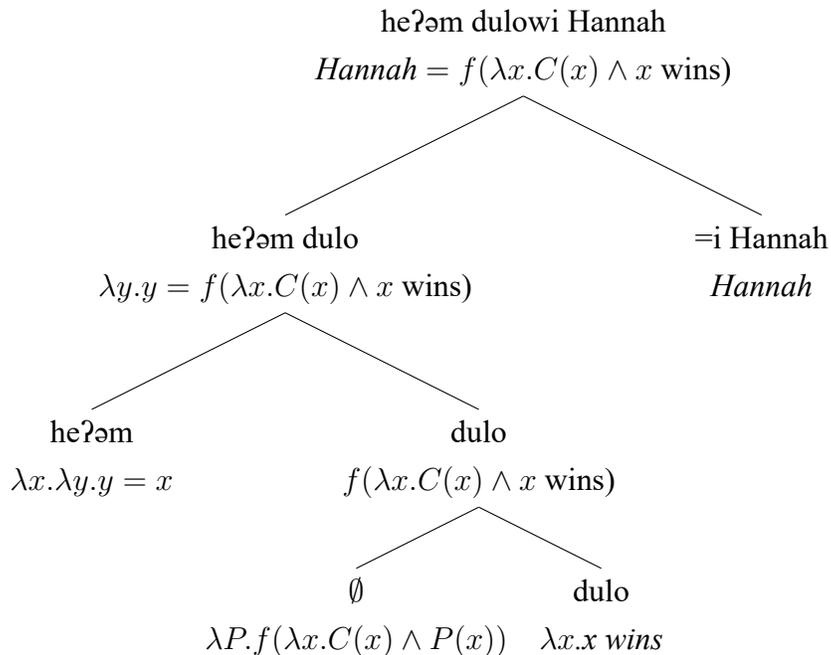
b.



For a sentence like (185a), in which the copular complement is not already of type e , a (null) determiner converts it to type e . I assume here a choice function analysis of the determiner along the lines of the Salishan determiners proposed in Gillon (2006) and Lyon (2013), in which the determiner introduces a choice functions variable f selecting a contextually relevant entity ($C(x)$) that the predicate is true of ($P(x)$).²¹

- (185) a. he?əṃ dulowi Hannah
 he=?m dulow=i Hannah
 be.3DIST=VER win=3DIST Hannah
 “Hannah is the winner.”

b.



This is therefore similar to the analysis Lyon (2013) gives for Okanagan equative sentences,

²¹I adopt their definition but for presentational simplicity have left out the world variable w .

with the difference being which elements are treated as covert: Lyon has overt determiners and covert equative copulas, whereas, for the reasons given above, I treat the determiner as covert and treat *he-* as being the overt expression of the equative copula.

4.2.10 Copular ambiguity

We saw in §4.1 that the distribution of the English copula is much wider than the distribution of the Kwak’wala copula. In the literature on English “be”, there is a debate of long standing regarding whether “be” is ambiguous:

- One-copula accounts: “be” has a single, predicative function (e.g. Stowell, 1981; Partee, 1987; Moro, 1997).
- Two-copula accounts: “be” is ambiguous between predicative and equative functions (e.g. Russell, 1919; Higgins, 1973; Akmajian, 1979; Rapoport, 1987).

The Kwak’wala copula is not ambiguous in this way; it appears consistently in equative sentences and does not occur in predicative sentences at all.²² One conclusion we might draw from this is that English “be” really is ambiguous: since Kwak’wala has an unambiguously equative copula, then the English copula, which is used in the equivalents of both Kwak’wala copular sentences and Kwak’wala non-copular (or “null” copular) sentences, must be ambiguous between these two copula types.

This is a possible conclusion, but not necessarily the only one. It is also possible that the English and Kwak’wala copulas are simply different structural elements altogether; I suggest that this might be the case in §4.3.7.

4.3 Type Ib copular sentences: clefts

In §4.2.3, I noted that there was a second order possible for Type I equative sentences, beyond the “canonical” equative order described in §4.2.3. In this order, which I term the “cleft”, the nominative DP comes second, after the copula, and what (at first) appears to be the copular complement follows.

²²Even in the locative and comparative copular sentences in §4.4, we can treat the Kwak’wala copula as equative. The closest English sentence to the Kwak’wala locative copular sentence would be, I think, something along the lines of “Vancouver is where Pat lives”; this is equative as well, equating Vancouver with the place that Pat lives.

(186) *yuduǔ* **Pat** *həm̩xʔi* ǰa *kutəla*
yu=d=uǔ **Pat** *hm̩-xʔid* ǰa *kutla*
 be.3MED=DET=3MED **Pat** eat-CHANGE ACC salmon
 “It’s **Pat** who ate the fish.”

(187) *hedida* *t̩axʔstu* *ləxalasuʔs*
he=d=i=da *t̩k-ʔstu* *lax-aʔa-sw̩=s*
 be.3DIST=DET=3DIST=DET **dirt-eye** steer-ONGOING-POSS-PASS=3POSS
 “It was **the brown** [car] that he was driving.”

As noted in §4.1.3, this has the hallmark of the Type I copular sentence: that the nominative DP (= *uǔ Pat*, = *ida t̩axʔstu*) is coreferent with what would be the subject of the other constituent (*həm̩xʔi ǰa kutəla*, *ləxalasuʔs*). Nonetheless, various aspects of the word order, morphology, and interpretation differ.

4.3.1 Word order

The word order of a Type Ib “cleft” sentence is similar to that of a Type Ia “canonical” equative sentence.

- First, the copula, *nugwa-*, *su-*, *ga-*, *yu-*, or *he-*, just as in a Type Ia sentence.
- Optionally, but very frequently, the enclitics =*ʔm* or =*d(a)*, again just as in a Type Ia sentence.²³
- The clefted constituent, a nominative DP.
- The remnant (§4.3.2).

It may, at first, appear that the relationship between clefts and canonical equative sentences (188a and 188b respectively) is the same as the relationship between second-position subject and *in-situ* subject predicative sentences (§B.6.1). That is to say, it may at first appear that clefts are just Type Ia equative sentences with the subject having moved to second position, as subjects in predicative sentences often do.

²³I should note that =*d(a)* seems to be more common in clefts, and =*ʔm* seems to be more common in canonical copular sentences, but each can occur in each type of sentence.

- (188) a. *hemí* **Ora** *laǰ^wəmeʔ*
 he=ʔm=i **Ora** *laǰ^w-(ǰ)m-aǰ*
 be.3_{DIST}=VER=3_{DIST} **Ora** *stand-face-NMZ*
 ‘‘It’s **Ora** who’s the oldest [one].’’ (Rough lit: ‘‘It’s Ora who stands in front.’’)
- b. *heʔəm* *laǰ^wəmeyǰ* **Ora**
 he=ʔm *laǰ^w-(ǰ)m-aǰ=i* **Ora**
 be.3_{DIST}=VER *stand-face-NMZ=3_{DIST}* **Ora**
 ‘‘**Ora** is the oldest [one].’’ (Rough lit: ‘‘Ora is the one who stands in front.’’)

However, one of the hallmarks of the second-position subject alternation is that third-person medial subjects, when they do not occur in second position, are represented by an agreement marker in that position; as observed in §4.2.2, the final subjects of canonical equative sentences are not represented by agreement markers.

- (189) a. *yuduǰ* **Ruby** *kəpǰidsəwǰ*
 yu=d=uǰ **Ruby** *kp-xǰid-swǰ*
 be.3_{MED}=DET=3_{MED} **Ruby** *scissor.motion-CHANGE-PASS*
 ‘‘It’s **Ruby** who got a haircut.’’
- b. *yuʔəm* *kəpǰidsəwǰuǰ* **Ruby**
 yu=ʔm *kp-xǰid-swǰ=uǰ* **Ruby**
 be.3_{MED}=VER *scissor.motion-CHANGE-PASS=3_{MED}* **Ruby**
 ‘‘**Ruby** is the one who got a haircut.’’

We can see also that the pattern of enclitics differs. In the canonical equative sentence in (190a), the copular complement *=ən wəʔox^wd* (‘‘the one I was with’’) has the first person possessive enclitic *=ən* before *wəʔox^wd*, whereas in the cleft equative sentence in (190b), the remnant *wəʔox^wdən* has the first person possessive enclitic after *wəʔox^wd*.²⁴

²⁴This is not to say that one of these constructions could not be derived from the other, just that they are not trivial rearrangements of the same constituents.

- (190) a. *higaṃən wəʔox^wdi Sarah*
higa=ʔm=n wauk^w=xd=i Sarah
only=VER=1POSS another=REC.PAST=3DIST Sarah
 “Sarah was the only **one I was with.**” (Lit: “Sarah was my only other.”)
- b. *hedi Sarah wəʔox^wdən*
he=d=i Sarah wauk^w=xd=n
be.3DIST=DET=3DIST Sarah another=REC.PAST=1POSS
 “It was Sarah **that I was with.**” (Lit: “It was Sarah who was my other.”)

Simply “moving” the subject of a canonical equative sentence to second position, as I did in (191), does not necessarily result in a well-formed cleft.

- (191) a. ✓ *yumən wayasuḥ Sarah*
yu=ʔm=n wayas=uḥ Sarah
be.3MED=VER=1POSS sweetheart=3MED Sarah
 “Sarah is my sweetheart.”
- b. ✗ *yumuḥ Sarahən wayas*
yu=ʔm=uḥ Sarah=n wayas
be.3MED=VER=3MED Sarah=1POSS sweetheart
 Intended: “It’s Sarah who’s my sweetheart” or “My sweetheart is Sarah.”

Moreover, the possessive enclitic after the remnant is sometimes missing altogether, as in (192).

- (192) *hedida ṅala miḥʔənxa*
hed=i=da ṅala miḥ_{-h}nxa
be.3DIST=3DIST=DET day sleep-time
 “It’s day when I sleep.”

4.3.2 The “remnant”

It is difficult to say exactly what sort of syntactic object the “remnant” – that is, that part of the sentence that is not the subject – is. Remnants are not just headless relative clause arguments; as observed in §4.3.1, they are missing the pronominals that we associate with arguments. Nor are they copular complements, at least not straightforwardly; while copular complements are missing their deictic pronominals, they at least exhibit possessive pronominals, which remnants

do not.

They are also not just an ordinary relative clause, headed by the clefted constituent. Such sentences exist, but they do not have the structure that we are concerned with here. We can see in (193), for example, that the prenominal possessive =ən does appear on the head *wáci*, rather than after the “remnant” or not at all.

- (193) *yumuḥda* *wáciyən* *?ix?ageya*
yu=?m=uḥ=da *wás-hi=n* *?ix?ak-wáy=a*
 be.3MED=VER=3MED=DET dog-NMZ=1POSS like-NMZ=a
 “This one is the dog that I like.”

Such sentences are sometimes encountered in the same kinds of situations in which we encounter clefts, but it is important to keep sentences like (193) conceptually separate from the “cleft” construction.²⁵

Cleft remnants do not, in general, seem to be a relative clause headed by the subject. For one, the overt *ḥa* that can introduce the relative does not occur. Moreover, sometimes these putative relative clauses would be headed by a verb, which is something that we observed in §3.4.3 seems to be forbidden.

- (194) *hedida* **qasa** *duḥ^w?aḷaḥa* *ḡiwas*
he=d=i=da **qasa** *duq^w-?aḷ=aḥa* *ḡiwas*
 be.3DIST=DET=3DIST=DET **walk** see-happen.to=ACC deer
 “**The one who was walking** saw a deer.” [not the one who was hunting]
 (Lit: “It was **the walk** who saw a deer.”) (Sherer, 2014, p. 25)

We also find apparent clause-level morphology within remnants, like a second instance of =?m within the remnant in (195), as well as a second instance of the reportative =l(a).

- (195) *he?əmláwisi* *Ći?stalis* *ćədaḥ?əmlá?ḥə?a*
he=?m=lá=wis=i *Ći?stalis* *ćədaq=?m=lá=ḥa=a*
 be.3DIST=VER=REPORT=AND.SO=3DIST Tide.of.the.World woman=VER=REPORT=ADD.FOC=A
 “And Tide of the World was also his daughter.” (Lit: “And it was Tide-of-the-World who was his daughter, too.”) (Boas and Hunt, 1905, p. 100) (=209)

Person morphology on remnant clauses varies, and speakers are somewhat hesitant about what endings are appropriate. In general, speakers use the “canonical” copular sentence when such person marking would be necessary, possibly because, as we will see, the cleft construction

²⁵To be precise, the sentence in (193) could itself be a “cleft” where the entire phrase *=uḥda wáciyən ?ix?ageya* is the clefted constituent, and there is no remnant.

can leave person entirely unexpressed.

Simple remnants – that is, those without arguments – frequently end in =*a*, as predicates do when subjects do not follow, suggesting that remnants are predicates. On the other hand, we sometimes find possessive morphology, reminiscent of the range of morphology on adjunct clauses, especially “when” clauses: postnominal possessives, but not the corresponding prenominal possessives.

(196) a. hedida ñala miχʔənxoʔoʔs
 hed=i=da ñala miχ-_hnX=a=uʔs
 be.3_{DIST}=3_{DIST}=DET day sleep-time=A=2_{POSS}
 “It’s day when you sleep.”

 b. hedida ñala miχʔənxs Jon
 hed=i=da ñala miχ-_hnX=s Jon
 be.3_{DIST}=3_{DIST}=DET day sleep-time=3_{POSS} Jon
 “It’s day when Jon sleeps.”

The pattern in the first person is particularly interesting, because first person marking is sometimes absent (197-198) and sometimes present (199-201), which is the pattern associated with the first person *postnominal* possessive enclitics (§B.4.4.9).

(197) a. w̃iduʔs miχʔənxoʔoʔs?
 w̃id=uʔs miχ-_hnX=a=uʔs?
 what=2_{POSS} sleep-time=INVIS=2_{POSS}
 “When do you sleep?”

 b. hedida ñala miχʔənxa
 hed=i=da ñala miχ-_hnxa
 be.3_{DIST}=3_{DIST}=DET day sleep-time
 “It’s day when I sleep.”

(198) a. m̃asuʔs loʎanəmoʔos
 m̃as=uʔs loʎ-_wanm=a=uʔs
 what=2_{POSS} get-obtained=INVIS=2_{POSS}
 “What did you catch?”

- b. hedida gə́lta wáci lolanəm
 hed=i=da glta wás-_hi loł-_wanm
 be.3DIST=3DIST=DET long dog-NMZ get-obtained
 “It’s the dachhund (lit: long dog) that I caught.”
- (199) a. m̄ac̄ac̄ən misəlasəw̄ε?
 m̄as-_hač̄=n mis-la-sw̄=a=a?
 what-??=1 smell-ONGOING-PASS=a=INVIS
 “What is it I smell?”
- b. hedida sup misəlasəw̄ən
 he=d=i=da sup mis-la-sw̄=n
 be.3DIST=DET=3DIST=DET soup smell-ONGOING-PASS=1POSS
 “It’s the soup that I smell.”
- (200) a. ʔəng^wiʔs wəʔok^wəs ləʔaquʔs laǰ Čamas
 ʔng^w=iʔ=s wauk^w=s l=a=a=q=uʔs l=(a)ǰ Čamas
 who=3DIST=2POSS another=2POSS PREP=EMBED=a=VIS=2POSS PREP=ACC Victoria
 “Who did you go to Victoria with?”
- b. hedi Sarah wəʔox^wdən, ləʔegən
 he=d=i Sarah wauk^w=xd=n l=a=i=g=n
 be.3DIST=DET=3DIST Sarah another=RPAST=1POSS PREP=EMBED=3DIST=3PROX=1POSS
 laǰ Čamas
 l=(a)ǰ Čamas
 PREP=ACC Victoria
 “It was Sarah that I went to Victoria with.”
- (201) a. ʔəng^wiʔs kəlx^wagiłəʔos ǰ^wa ʔixpəʔomas
 ʔng^w=iʔs klx^wa-gił=a=us ǰ^wa ʔik-p̄-ʔumas
 who=3DIST=2POSS buy-reason=INVIS=2POSS ACC.3MED good-taste-thing
 “Who did you buy the candy for?”
- b. hedi Sarah kəlx^wagiłən
 he=d=i Sarah klx^wa-gił=n
 be.3DIST=DET=3DIST Sarah buy-reason=1POSS
 “It was Sarah that I bought it for.”

This similarity to “when” clauses – the lack of prenominal enclitics, the apparent use of post-nominal enclitics as person marking – suggests that cleft remnants are likewise some manner of adjunct clause modifying the entire sentence, rather than an ordinary relative clause modifying the clefted constituent.

4.3.3 Restricted focus interpretations

Cleft equative sentences, like nominal predicates, have restricted focus interpretations; while in a canonical equative sentence either element can serve as the focus (§4.2.4), in cleft equative sentences focus interpretation is restricted.

- (202) a. $\text{ʔəng}^w\text{i}$ $\text{wəq}^w\text{εʔs}$ Sara
 $\text{ʔng}^w=\text{i}$ $\text{wq}^w=\text{a}=\text{a}=\text{s}$ Sara
 who=3_{DIST} brother=a=INVIS=3_{POSS} Sara
 “Who is Sara’s brother?”
- b. ✓ hemi Mervin $\text{wəq}^w\text{as}$ Sara
 he=?m=i Mervin $\text{wq}^w\text{a}=\text{s}$ Sara
 be.3_{DIST}=VER=3_{DIST} Mervin brother=3_{POSS} Sara
 “Mervin is Sara’s brother.” (Lit: “It is Mervin who is Sara’s brother.”)
- (203) a. $\text{ʔəng}^w\text{i}$ Mervin?
 $\text{ʔng}^w=\text{i}$ Mervin?
 who=3_{DIST} Mervin
 “Who is Mervin?”
- b. ✗ hemi Mervin $\text{wəq}^w\text{as}$ Sara
 he=?m=i Mervin $\text{wq}^w\text{a}=\text{s}$ Sara
 be.3_{DIST}=VER=3_{DIST} Mervin brother=3_{POSS} Sara
 “Mervin is Sara’s brother.” (Lit: “It is Mervin who is Sara’s brother.”)

The raises the question of what, exactly, causes the focus interpretation of these sentences to be constrained in this way; in Chapter 6, I propose that both clefts and nominal predicates constrain focus interpretation because of they involve marked predication structures, rather than because they dislocate the focus to the left edge of the sentence (cf. Koch, 2008).

4.3.4 Exhaustivity of clefts

As with English clefts, we find that Kwak’wala clefts seem to come along with some manner of exhaustive meaning, but like in the neighboring Salishan languages (Davis et al., 2004; Koch, 2008; Lyon, 2013), this meaning is easily cancellable. This suggests that the exhaustive meaning is some kind of implicature (Halvorsen, 1976; Horn, 1981) rather than a presupposition (Delin, 1992) or entailment (Atlas and Levinson, 1981; É. Kiss, 1999).

For example, in response to the following sentences, the speaker noted that it sounded like Pat was the only person with a car in (204) and Jackie was the only person bringing drinks in (205).

- (204) *Context: We are discussing who has access to transportation, for the purpose of driving consultants to and from elicitation sessions.*

yuduḥ Pat kanuk^{wa}
 yu=d=uḥ Pat ka-nuk^{wa}
 be.3MED=DET=3MED Pat car-have

“It’s Pat who has a car.”

Speaker comment: “Sounds like he’s the only one.”

- (205) *Context: We are pretending to plan a party, and trying to figure out who is bring what.*

hedī Jackie ʔəḥʔiḥ ḥa nənquma
 he=d=i Jackie ʔḥ-xʔid=λ ḥa nnquma
 be.3DIST=DET=3DIST Jackie do-CHANGE=FUT ACC drinks

“It’s Jackie who’s bringing the drinks.”

So it seems likely that Kwak’wala clefts, like English clefts, introduce some manner of exhaustive meaning. However, this projected meaning appears to be cancellable much more easily in Kwak’wala than it is in English.

- (206) *Context: We are barbecuing a large salmon for a feast, but after leaving it unattended for some time we return and see that it is gone. After investigation, we discover:*

a. yuduḥ da giʔgəngənanəm həmxʔida ḥa kʷtəla
 yu=d=uḥ da gý-gn-gn-_wanm hm-(x)_hida ḥa kʷtla
 be.3MED=DET=3MED DET REDUP-REDUP-young-person eat-CHANGE ACC salmon

“It’s the children who ate the fish.”

- b. ✓ ʔug^waqəʔəmi da giʔgigəʔoʔnuk^w həm̩xʔi ʃa kʉtəla
 ʔuk^w-_waq=ʔm=i da gý-gi-gʔoʔnuk^w hm̩-(x)_hid ʃa kʉtla
 other-go=VER=3DIST DET REDUP-REDUP-parent eat-CHANGE ACC salmon
 “The parents ate the fish, too.”

To confirm this, I attempted a contradiction test. As we will see in §7.3.2.3 and §7.3.4.3, exclusive (“only”, “just”) operators are incompatible with a follow-up that contradicts this exclusivity. Clefts, however, are compatible with follow-ups that contradict their exclusivity (207b).

(207) *Context: In the next room, I have a variety of pets – birds, cats, and a dog – and they’re making a variety of annoying noises.*

- a. m̩ačalʉx̩da ʃiʔʃəntalax̩
 m̩ačal=uč=da ʃý-ʃnt-(k)_ha-l=(a)q
 what=3MED=DET REDUP-snore-sound-ONGOING=VIS
 “Who is snoring in there?”
- b. ✓ yudən biʔbusiʃ ʃəntala, ʔug^waqəʔəmx̩əʔən
 yud=n bý-busi=q ʃnt-(k)_ha-la, ʔuk^w-_waq=ʔm=ʃa=n
 be.3MED=1 REDUP-cat=VIS snore-sound-ONGOING, other-go=VER=ADD.FOC=1
 w̩aciʃ ʃəntala
 w̩as-_hi=q ʃnt-(k)_ha-la
 dog-NMZ=VIS snore-sound-ONGOING
 “It’s my cats that are snoring, and my dog is snoring too.”
 Speaker comment: “As long as you don’t say *higamux̩* [only].”

I have encountered one conversational (i.e., non-constructed) example of this, in (208).²⁶

(208) *Context: We were passing around a box of animal crackers, each person taking one. Two people found a goat (an elicitor and a speaker); other people found other animals. The elicitor asks the speaker who got a goat.*

- a. **su**ʔəm loʔ ʃa m̩əlʃʃlu,
 su=ʔm loʃ ʃa m̩əlʃʃlu
 be.2=VER get ACC mountain.goat
 “It’s **you** who got a goat.”

²⁶I should note that it is possible here that the first sentence is just a canonical equative sentence – it is difficult to tell, in the first and second persons – or that the follow-up involves the speaker changing their mind. However, given the above examples, in which speakers responded explicitly that there was no contradiction between clefts and additive follow-ups, I think it is at least plausible that this is an example of this, as well.

Percus analyzes a sentence like “It is [John]_F that Mary saw” as being an inverse copular sentence whose predicate is “is John” and whose subject is a special null-headed relative clause (211a). This relative clause extraposes rightward (211b) – presumably to a clause-level adjunct position, although Percus is not explicit about this – and the remaining [_{DP} the ∅] is spelled-out as “it” (211c).

- (211) a. [[_{DP} the ∅ [_{CP} that Mary saw] [_{VP} is John]]
 b. [[[_{DP} the ∅ *t_i*] [_{VP} is John]] [_{CP} that Mary saw]_{*i*}]
 c. Spell-out: [[[_{DP} it *t_i*] [_{VP} is John]] [_{CP} that Mary saw]_{*i*}]

I adopt this style of account for a few reasons.

In §4.3.2, I noted that the remnant was unlike an ordinary relative clause in that its prenominal material was missing, making it unlikely to be (on its own) the subject, and unlikely to be a relative clause modifying the clefted constituent. Rather, like a Percus remnant, it is like a relative clause but missing some initial material. Also, the remnant can occur to the right of otherwise clause-final material like *lənswət* (“yesterday”), so a clause-level rightward adjunct position would be a reasonable surface position for it.

- (212) hedi Masaki **lənswət** həmxʔi ʃa musmus
 he=d=i Masaki **ləns-wət** hm-xʔid ʃa musmus
 be.3DIST=DET=3DIST Masaki **next.day-PAST** eat-CHANGE ACC COW
 “It’s Masaki who ate a cow **yesterday**.”

Moreover, the analysis of the nominative DP as the predicate would explain several aspects of their semantic interpretation. For one, having both nominal predicates and clefted constituents be predicates allows the possibility of a unified account of why they constrain focus interpretation in a similar manner (which I pursue in Chapter 6).

It also would explain an interesting pattern regarding the apparent predicate-modifying enclitics (§B.4.2) like =*nax*^v (“ever, sometimes”) and =*xse* (“still”), and the auxiliary *həyulis* (“always”). In all other sentences I have encountered, these modifiers modify the predicate, but in clefts like (213) and (214) appear to modify the clefted constituent.²⁷

²⁷Since the differences between “X_F always/still does Y” contexts and “X always/still does Y_F” contexts are rather subtle, it is hard to prove that (213) and (214) must be instances of the former. However, since speakers choose to use a special construction to express these, and I never see this construction type except in these types of context, I think it is safe to assume that speakers *are* managing to intuit the subtle difference between these contexts.

- (213) *Context: When we go to Vancouver Island, we sometimes use public transit and sometimes borrow a car from Sarah’s relatives. In the latter case, the driver is always Sarah.*

henak^wi Sarah həyulis λəxala
 he-nak^w=i Sarah hyulis λxala
 be.3DIST-ever=3DIST Sarah always steer
 “It’s always Sarah who drives.”

- (214) *Context: After many years away, I’ve returned to town, and am asking about the restaurant at which we all used to hang out. Back in the old days, Laura was always stuck with sweeping the floor, and Jon was always the dealer in the long-running card game, and I’m wondering if this is still the case.*

hexsemeʔe Jon ʔəxaliʔ sa liʔlibayu
 he=xse=ʔm=a=i Jon ʔx-al-_wiʔ sa ly-lip-_wayu
 be.3DIST=still=VER=QUES=3DIST Jon do-ONGOING-IN.HOUSE OBL REDUP-play.cards-INSTR
 “Is it still Jon who deals?”

We could, on the other hand, say that =*nax^w*, *həyulis*, and =*xse* are simply focus-sensitive (as they are in English), that clefts restrict focus interpretation, and that the restricted focus interpretation leads to the interpretive difference. However, we do not otherwise observe these modifiers associating freely, and a Percus-style account would serve as a straightforward (rather than roundabout) explanation of their predicate-like behavior here: that clefted constituents act like predicates because they are predicates.

Furthermore, a Percus-style account of clefts derives the exhaustivity presupposition of a cleft from the exhaustivity presupposition of the definite determiner. Since Kwak’wala determiners do not appear to come with exhaustivity presuppositions (Black, 2012), this would correctly predict the lack of exhaustivity presuppositions in Kwak’wala clefts (§4.3.4) (cf. Lyon, 2013).

4.3.6 The clefted constituent as subject

In the English example in (211a), it would appear that the clefted constituent (“John”) originates as the copular complement. This would raise a problem for Kwak’wala clefted constituents, however. Copular subjects and copular complements are morphologically distinct: the latter are missing their deictic determiners, like *Billy* in (215a). That clefted constituents retain their

deictic determiners suggests that they are not copular complements.²⁸

- (215) a. heʔəm Biliyida babag^wəm
 he=ʔm Bili=i=da ba-bk^w-_{rw}m
 be.3_{DIST}=VER Billy=3_{DIST}=DET REDUP-boy-DIMIN
 ‘‘That’s Billy.’’ (Lit: ‘‘That boy is Billy.’’) (Powell et al., 1981b, p. 12) (=184a)

This is not necessarily a problem, however, or even a surprise; many authors exploring the syntax of English inverse copular sentences (e.g. Heggie, 1988; Heycock, 1994; Moro, 1997; den Dikken, 2006) have suggested that the apparent predicates of inverse copular sentences – ‘‘Mervin’’ in ‘‘Sara’s brother is Mervin’’ – are subjects at an earlier stage of derivation: that they are the subjects (or, at least, the left-hand sisters) of an embedded clause-like constituent (a small clause or something similar), and the difference between canonical and inverse sentence is whether the ‘‘subject’’ or ‘‘predicate’’ of this embedded constituent is the one to raise to the subject of the sentence as a whole.

- (216) a. Base structure: [COP [S CC]]
 b. Canonical copular sentence: [[COP [*t_i* CC]] S_{*i*}]
 c. Equative copular sentence: [[COP [S *t_i*]] CC_{*i*}]

Percus (1997) adopts Moro’s derivation of copular sentences for an additional reason: to explain why the subjects of inverse copular sentences can extrapose in the necessary way, but the subjects of canonical copular sentences cannot.

Assuming for the moment that *he-* is in the same structural position as COP in (216)²⁹, that the subject follows the copular complement within its small clause, and that the special determiner spell-out (i.e., the Percus ‘‘it’’) is phonologically null (\emptyset) in Kwak’wala³⁰, this would give us the structure in (218a) for the canonical (type Ia) equative sentence in (217a) and the structure in (218b) for the cleft (type Ib) equative sentence in (217b).

- (217) a. heʔəm λax^wəmeyⁱ Ora
 he=ʔm λax^w-(ǧ)m-ay⁼ⁱ Ora
 be.3_{DIST}=VER stand-face-NMZ=3_{DIST} Ora
 ‘‘Ora is the oldest [one].’’ (Rough lit: ‘‘Ora is the one who stands in front.’’)

²⁸Moreover, in §4.3.7, we will see two additional ways that the clefted constituent seems to act like the subject of a canonical (type Ia) equative sentence, rather than its copular complement.

²⁹I will suggest a modification to this in §4.3.7.

³⁰Note that I had already assumed a null determiner for the copular complement in §4.2.9, which appears in (218a).

- b. $hem\dot{i}$ **Ora** $\lambda a\check{x}^w\acute{o}me\acute{?}$
 $he=?m=i$ **Ora** $\lambda a\check{x}^w-(\check{g})m-a\acute{y}$
 $be.3_{DIST}=VER=3_{DIST}$ **Ora** stand-face-NMZ
 “It’s **Ora** who’s the oldest [one].” (Rough lit: “It’s Ora who stands in front.”)

- (218) a. [[$he\acute{?}am$ [[\emptyset $\lambda a\check{x}^w\acute{o}me\acute{y}$] t_i]] [=i Ora]_i]
 “Ora is the oldest [one].” (Rough lit: “Ora is the one who stands in front.”)
 b. [[[$hem\dot{i}$ [t_i [=i Ora]]] [\emptyset t_j]_i] $\lambda a\check{x}^w\acute{o}me\acute{?}_j$]
 “It’s Ora (who’s the oldest [one]).” (Rough lit: “It’s Ora (who stands in front).”)

In terms of their semantic derivation, however, these structures still have a problem. Assuming (as I did in §4.2.9) that *he-* represents the equative function $\lambda y.\lambda x.x = y$ and that the copular complement is of type *e*, the structures above would cause a type clash (attempting to compose the two type *e* elements together before composing the type $\langle e,et \rangle$ element).

We could posit that a type-shifting operation rescues the composition of type *e*’s rather than have *he-* represent the equative function (as Partee, 1987, does for English “be”), but that would predict a “be”-like distribution of *he-*, rather than a distribution where *he-* appears in equative but not predicative sentences. Another possibility would be to have *he-* itself intervene between the type *e* constituents, which is the solution I adopt below.

4.3.7 A low equative copula

The idea in §4.3.6 – that the cleft is a sort of inverse copular sentence, created by leaving the *S in-situ* while raising *CC* to be the sentential subject – does not nail down the position of *he-* with respect to the copular complement. Above I was assuming that *he-* was a realization of COP in the structure above, but another possibility is that COP is not phonologically realized (or not present at all, as in Lyon, 2013), and *he-* represents a lower element with *CC* as its complement and *S* as its specifier.

- (219) a. Base structure: [COP [[*he-* CC] S]]
 b. Canonical copular sentence: [[COP [[*he-* CC] t_i]] S_i]
 c. Inverse copular sentence: [[COP [[*he-* t_i] S]] CC_i]

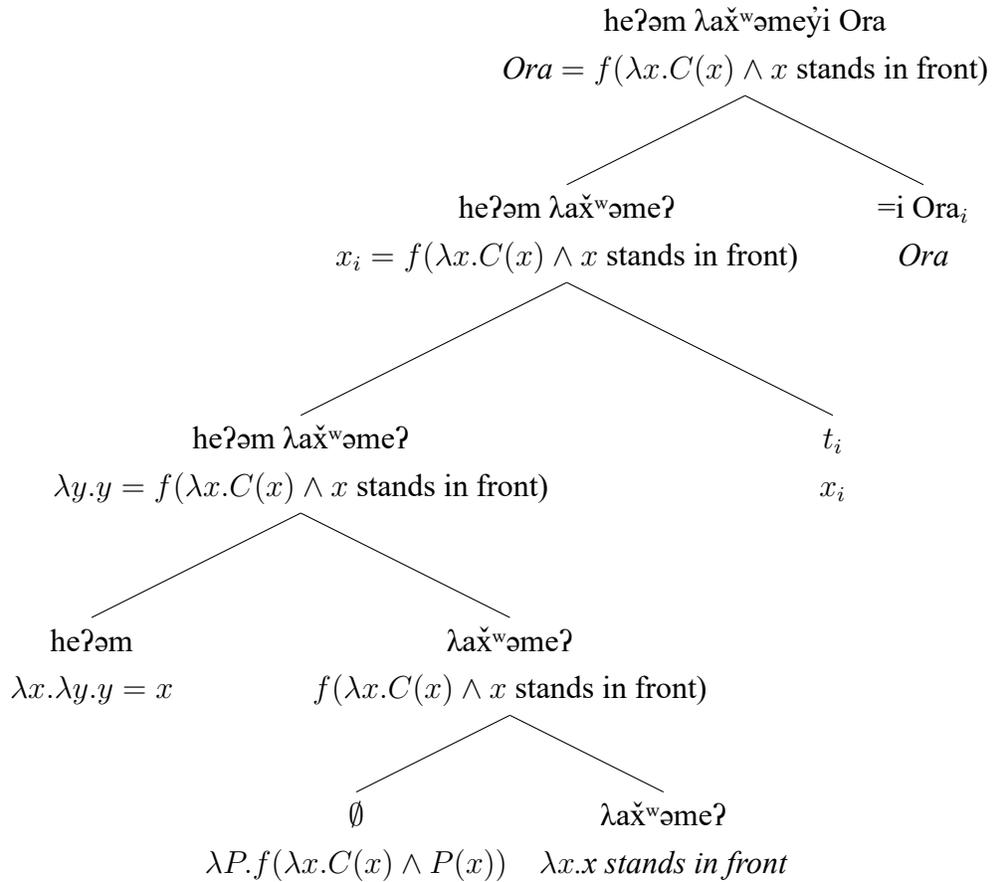
The examples in (218) would, then, have the structures in (220) instead.

- (220) a. [[(COP) [[$he\acute{?}am$ $\lambda a\check{x}^w\acute{o}me\acute{y}$] t_i]] [=i Ora]_i]
 “Ora is the oldest [one].” (Rough lit: “Ora is the one who stands in front.”)

- b. [[[(COP) [[heʔəm t_i] [=i Ora]]] [∅ t_j]_i] λaǰwəmeʔ_j]
 “It’s Ora (who’s the oldest [one]).” (Rough lit: “It’s Ora (who stands in front).”)

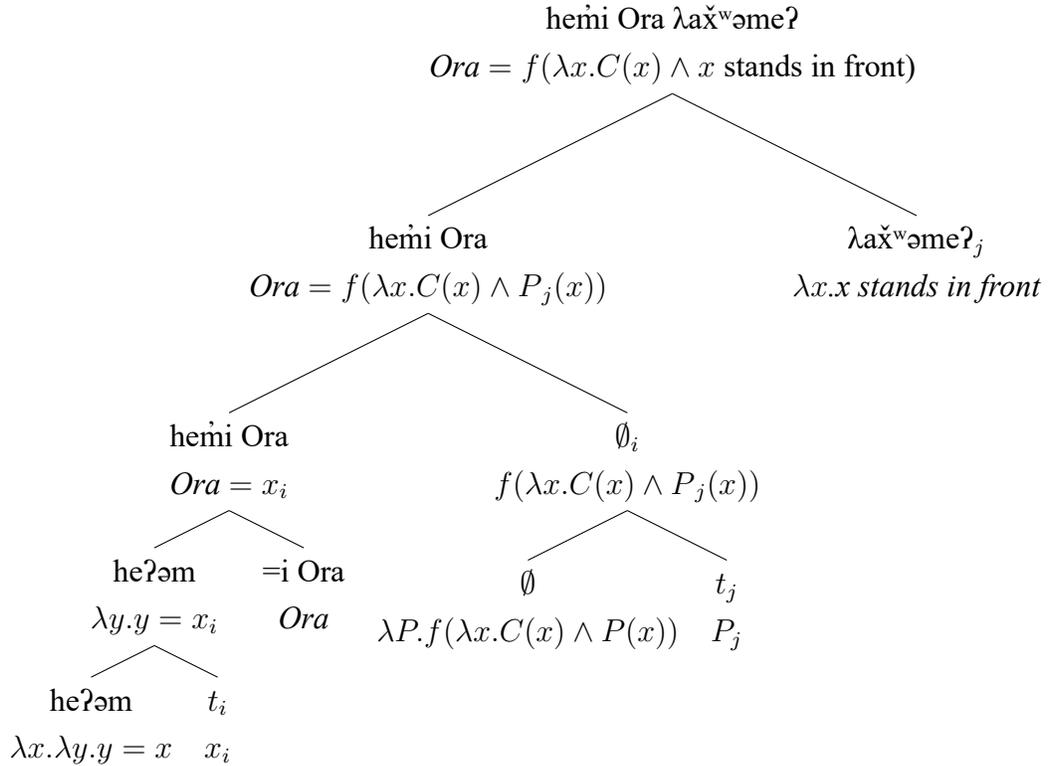
Assuming the structures in (220), and the Gillon- (2006) and Lyon-style (2013) determiners used in §4.2.9, this would give us the derivation of canonical equative sentences in (221a) and the derivation of cleft equative sentences in (221b). As COP would be both phonologically null and semantically vacuous, I leave it out of the derivation here.³¹

(221) a.



³¹For these trees, I am assuming Heim and Kratzer (1998) movement, in which movement is implemented as variable binding, but for brevity have not represented it explicitly in the trees.

b.



I think there are several reasons that make this structure – I will call it the “Low *he-* hypothesis” – plausible for Kwak’wala, beyond just making the type composition succeed.

An important aspect of canonical and cleft structures here, that is not true of the canonical and cleft structures in (218), is that *he-* and *=i Ora* have the same relationship regardless of whether the sentence is canonical or cleft. That is, the equative core of the sentence retains the same basic structure in both orders, the same as the structure originally proposed for canonical equation in §4.2.9. There are two phenomena that suggest that this might be the case.

For one, the Kwak’wala copula agrees with *S* both in canonical equatives and clefts, which is straightforwardly achieved if, in both cases, the *S* has had the same relationship with *he-*. In the “high *he-*” account, we might expect that the Kwak’wala copula would agree with whatever becomes the matrix subject. This does not seem to be the case. Although we cannot directly observe the deictic category of the cleft-sentence remnant, future entities like *wayasλ* (“future sweetheart”) are always treated as distal, and therefore, if *wayasλ* were the matrix subject and were to cause agreement on the copula, then the copula should have the form *he-* rather than *yu-* in (222)

- (222) $yu\lambda u\check{x}$ Masakiy \check{x} wayas λ
 $yu=\lambda=u\check{x}$ Masakiy= q wayas= λ
 be.3MED=FUT=3MED Masaki=VIS sweetheart=FUT
 “Masaki will be the sweetheart.”

Secondly, the exclusive copula *hig-* has a distinctive association pattern, wherein it always associates with the nominative argument (like *=i kwənikʷ*, “bread”) regardless of whether the sentence is canonical or cleft.

(223) a. *higəʔəm həmeʔsuħeʔeda kwənikʷ*
hig=ʔm hm-ayʔ=s=uħ=a=i=da kwəns-w kw
 only=VER eat-NMZ=3POSS=3MED=EMBED=3DIST=DET **bake.bread-PART**
 “**Bread** is the only thing she eats.”

b. *higamida kwənikʷ həmeʔsuħ*
higa=ʔm=i=da kwəns-w kw hm-ayʔ=s=uħ
 only=VER=3DIST=DET **bake.bread-PART** eat-NMZ=3POSS=3MED
 “It’s only **bread** that she eats.” (Rough lit: “It’s **bread** that’s the only thing she eats.”)

If *hig-* is in the same position as COP, and *hig-* always associates with the same structural argument, and these are canonical (223a) and inverse (223b) copular sentences that differ according to which constituent is made the subject of *hig-*, then we might expect them to differ in their meanings. On the other hand, if *hig-* is low, then *=ida kwənikʷ* (“the bread”) can be in the same relationship to it in both sentences; this would account for (223a) and (223b) having the same meaning without additional and novel association mechanisms.

Another reason to potentially prefer a “low *he-*” account is that the idea that the equative function of an equative copular sentence – whether that be a type-shifting operation, a special small-clause type, or a functional head – occurs structurally lower than a predicative “be” is a familiar position in the literature on English equative sentences (Partee, 1987; Heycock and Kroch, 1999). This goes back to the “one copula or two?” debate mentioned in §4.2.10; one position that we can take regarding the apparent ambiguity of “be” between predicative and equative uses is that there is only one “be” – the predicative one – and the difference between the two types of sentences is due to a difference in the complement of “be”. Predicative sentences have a predicative copular complement, equative sentences have an equative copular complement. So one thing that *he-* could be is the equative operator that makes the equative copular complement equative.

So finally, the “low *he-*” hypothesis provides a potential parameter of difference between English “be” and the Kwak’wala copula: that English “be” represents the high, predicative copula (and therefore does not differentiate between predicative and equative sentences), while Kwak’wala *he-* represents a specifically equative function within the copular complement (and therefore only shows up in equative sentences). That is to say, English and Kwak’wala would

differ not according to how their copulas work, but which functional element is overtly realized.³²

It is not my goal here to unify predicative and equative sentences in both Kwak’wala and English, deriving all of them from a single universal base sentence. I put this structure forward, however, for two reasons. For one, it makes a somewhat different, more nuanced claim than that made in the introduction. In a way, Boas et al. (1947, p. 205) would have been correct that Kwak’wala “lacks the defining verb ‘to be’”, if English and Kwak’wala copulas are not the same kind of functional element.

Secondly, the account of focus association that I use in Chapter 7 makes the assumption that we can define Kwak’wala association in terms of syntactic sisterhood. This is a simplistic assumption, but is adequate for the sentences that I have encountered, so long as we accept that focus operators associate with potentially larger constituents than foci (cf. Wagner, 2006; Krifka, 2006). The main complication, however, would be with *hig-*; as mentioned above, it exhibits both a canonical and cleft order without changing its subject-association behavior. The “low *hig-*” structure would be one way to allow a uniform structural treatment of the relationship between *hig-* and its subject, thereby keeping the semantic definition of *hig-* free of the syntactic complications seen here.

4.4 Type II copular sentences: locatives

In the sections above, I have primarily concentrated on the copulas in equative sentences. These are not, however, the only uses of copulas in the language. There is another kind of copular sentence – for lack of a better term I will call them “type II” sentences – with a rather different structure than that seen in equative sentences in §4.2. It appears in three types of sentences.

- Locative sentences (e.g. “I am in Vancouver”).
- Measure sentences (e.g. “It was as big as a house”).
- Resemblance sentences (e.g. “I look like Jon.”).

These seem to share a common structure, similar in some ways to the structure seen in equative sentences (e.g., a final nominative subject), but their copular complement is unusual. Whereas we might expect the predicates in the copular complement to have a voice suffix and

³²I should note also that, since Kwak’wala distinguishes predicative and equative sentences by the presence of the copula, Kwak’wala clefts support theories like those of Heycock and Kroch (1999), Romero (2005), and Lyon (2013) in which clefts are a variety of equative sentence, rather than being derived from an inverse predicative copular sentence (as in den Dikken, 2006).

an oblique argument, as they would in regular equative sentences, these copular complements have no voice suffixes and what appears to be a *nominative* subject. What is more, the matrix subject is equated not with what would be the predicate’s subject, but the entity that would have been the predicate’s subject had the embedded predicate received the voice suffix *-was*.

I have no particular analysis of these to offer, but they are worth describing in detail, both because they can confound syntactic analysis (in the same way that equative sentences have), and also because they pose a potential problem for the idea that only subjects move: it is on the basis of several “type II” copular sentences that Sherer (2014) establishes that Kwak’wala A’-movement is not limited to subjects.

4.4.1 Locative copular sentences

As mentioned in §B.5, most expressions of location in Kwak’wala are predicative, using one of a wide variety of positional, postural, and shape predicates. However, not all locative relationships are expressed in this way; there is also a kind of copular sentence that can be used to express location, especially in situations in which the posture, relevant position, and shape of the entity would be irrelevant.

- (224) *hemí* *ləʔeda* *həməʔelas*
 he=ʔm=i *l=a=i=da* *hm-wil-was*
 be.3DIST=VER=3DIST *PREP=EMBED=3DIST=DET* *eat-indoors-PLACE*
 “He’s at the restaurant.” (Rough lit: “The restaurant is where he is.”)

- (225) *hedən* *ləʔeda* *skul* *ǰa* *maʔpənagila*
 he=d=n *l=a=i=da* *skul* *ǰa* *maʔ-pn-agila*
 be.3DIST=DET=1 *PREP=EMBED=3DIST=DET* *school* *ACC* *two-ORD-timespan*
 “I was at school for two years.” (Rough lit: “The school was where I was, for two years.”) (Cranmer and Janzen, 2014)

- (226) *Context: I find an envelope with a large check in it. It belongs to Henry, but nobody can find him. It’s the afternoon, so one of the possibilities is that he’s gone to pick up his son at school.*

- heǰənti* *ləʔeda* *skul*
 he=ǰnt=i *l=a=i* *da*
 be.3DIST=MODAL=3DIST *PREP=EMBED=3DIST* *DET*
 “He might be at the school.” (Rough lit: “The school might be where he is.”)

This element, *ləʔ*, *leʔ*, or *leʔ*³³, is probably a form of the verb *l-* (“go”) or the preposition *l-* (“at”); this is also the form we find introducing temporal adjunct clauses (e.g., “when...”) ³⁴ (§B.6.6.2). Boas et al. (1947) note, regarding the appearance of this form in interrogative locative sentences (§4.4.2), that “*le* is a form of the verb *la* and must be considered a separate word and seems to indicate the region in which the object is supposed to be” (Boas et al., 1947, p. 265).

leʔ is the most frequent component that intervenes between the *he(da)* and the apparent subject, but sometimes it is absent, and instead another stem (usually locative in nature like “come from” or “live”) occurs in its place.

- (227) *hedə* *gayuʔida* *nəʔange*
 he=də *gayuʔ=i=də* *nʔ-nge*
 be.3DIST=DET be.from=3DIST=DET REDUP-mountain
 “It [the cougar] comes from the mountains.” (Rough lit: “The mountains are where it comes from.”) (Goodfellow et al., 1991, p. 29) (=141)

- (228) *hedən* *gukʷəliʔ*
 he=d=n *gukʷ-l=iʔ*
 be.3DIST=DET=1 dwell-ONGOING=3DIST
 “I live over there.” (Rough lit: “That is where I live.”)³⁵)

Although these may at first appear to be ordinary Type I copular sentences of the sort seen in §4.2, there is one important difference, in that unlike Type I copular sentences, the subject (that is, the final DP) is not coreferential with what would be the *subject* of the copular complement, but rather with what would be a *locative* argument of the copular complement. This unexpected deviation from Kwak’wala norms is pointed out by Sherer (2014).³⁶

³³This can sound like *l’*, as if it were the reportative evidential =*l’a*, but this element is not restricted to “reportative” or “hearsay” contexts; it occurs even in contexts where the assertion is supported by firsthand knowledge (225) or conjecture (226).

In any case, the reportative seems to be rare in contemporary casual Kwak’wala, at least in my experience, whereas this element is fairly frequent.

³⁴I gloss this form with an “embedding” =*a*, because that is how I gloss *leʔ* in temporal adjunct clauses, but I do not know why *l-* takes this form here, other than possibly it being a special form of *l-* that occurs in embedded contexts.

³⁵Since *gukʷ-al-* is both the verb for “to dwell” and the noun “village”, this might also be an ordinary Type I equative sentence, “That is my village.” However, the co-occurrence of =*d(a)* and =*ən* here is very rare in Type I copular sentences, whereas it is common in Type II copular sentences, suggesting that this is not a Type I copular sentence.

³⁶Sherer (2014), using clefts and questions as part of her diagnostics for movement, finds various sentences where there would have to be coreference – specifically, by movement – of locative and temporal arguments. However, since clefts, locative questions, and temporal questions are varieties of copular sentences (§4.3, §4.4.2, §4.4.3), what she actually establishes is that some *copular* sentences would have to utilize movement (or a coref-

That is, ordinarily we would expect that the copular complement would have to have the place nominalizer *-was*, like *ləʔas* (“place of going, location, destination”) or *gayulas* (“place of being from, origin”), rather than just *l-* (“go”) and *gayul-* (“be from”). This is what we see in, for example, (229).³⁷

- (229) *higəʔəm ləʔasləsuʃ* **Patəʔe** Sweden
hig=ʔm l-was=ʃ=s=uʃ **Pat=a=i** Sweden
only=VER **go-PLACE=FUT=3POSS=3MED** **Pat=EMBED=3DIST** Sweden
“Pat is only going to Sweden.” (Lit: “Sweden is-the-only **destination of Pat**”)

Other than in Type II sentences, this *-was* is in general the way that locative headless relative clauses are formed:

- (230) *kiʔsən qəʔələx uʔs* **guk^wələʔasoʔoʔs**
kiʔs=n qəʔə-l=(a)ʃ=uʔs **guk^w-l-was=a=uʔs**
not=1 know-ONGOING=ACC=2POSS **dwel-ONGOING-PLACE=INVIS=2POSS**
“I don’t know **where you live.**” (Lit: “I don’t know your dwelling-place.”)

- (231) *mayaʔxəla ʃ uʔs ləʔasaquʔs*
mayaʔx-la ʃ=uʔs l-was=a=q=uʔs
respect-ONGOING ACC=2POSS **go-PLACE=a=VIS=2POSS**
“Respect **where you are.**” (Lit: “Respect your location.”)

Also, note that in an ordinary Type Ia sentence like (229), we see the subject of going (here, Pat) is expressed as a possessor of *ləʔas* – *as =s=uʃ Pat* rather than a nominative subject *=uʃ Pat* – again as we would expect in an ordinary Kwak’wala sentence.

Thus, given that the place nominalizer *-was* is missing in Type II copular complement stems, we might predict that their associated subjects would still be in nominative case. This prediction is borne out (232-235).

- (232) *heda gayulida ʔuʔligənəʔeda ʔaʃi.*
he=da gayul=i=da ʔwʔlign=a=i=da ʔaʃ-hi.
be.3DIST=DET be.from=3DIST=DET **wolf=EMBED=3DIST=DET** inland-NMZ
“**Wolves** are from the forest.” (Rough lit: “The forest is where wolves are from.”)
(Goodfellow et al., 1991, p. 31)

erential mechanism of similar power) of this sort.

³⁷I have not encountered this “Type II” copular sentence with either the exclusive (*hig-*) or negative (*kəyos*) copulas.

- (233) heda miḥmiḥ **ida** təminasəʔeda λoʔs.
 he=da miḥ-miḥ=**i=da** tminas=a=i=da λaḥ^w-_hs.
 be.3DIST=DET REDUP-sleep=3DIST=DET **squirrel**=EMBED=3DIST=DET stand-on.ground
 “**The squirrel** sleeps³⁸ in the tree.” (Rough lit: “The tree is where the squirrel sleeps.”)
 (Goodfellow et al., 1991, p. 43)

- (234) *Context: We have set up a map of the British Columbian Lower Mainland and have set up a some toys and other markers on it.*

hedi ləʔeda mig^wateʔeda Vancouver
 he=d=i l=a=**i=da** mig^wat=a=i=da Vancouver
 be.3DIST=DET=3DIST PREP=EMBED=**3DIST=DET** **seal**=EMBED=3DIST=DET Vancouver
 “**The seal** [toy] is in Vancouver.” (Rough lit: “Vancouver is where the seal is.”)

- (235) hedi leʔe Saraʔeda
 he=d=i l=a=**i** Sara=a=e=da
 be.3DIST=DET=3DIST PREP=EMBED=**3DIST** **Sarah**=EMBED=3DIST=DET

hamiʔxsiləʔas
 ham-^y-xsi-l-_was
 food-NMZ-occupy-ONGOING-PLACE

“**Sarah** is in the kitchen.” (Rough lit: “The kitchen is where Sarah is.”)

There are what appear to be two nominative subjects in these sentences. This is unusual for Kwak’wala; aside from these sentences, and other Type II copular sentences, no other sentences in this entire work, or in my fieldwork corpus, have this property.³⁹

However, sentences with multiple nominative subjects are not, outside of Kwak’wala, unusual; all of my rough literal translations of (232-235) have two nominative subjects. It is only unusual for Kwak’wala because, except in these sentences, Kwak’wala does not otherwise allow arguments other than the subject to move, and therefore we do not see relative clauses (headless and otherwise) in which another argument has relativized and left the subject behind.

Which of these subjects is, then, the matrix subject? That is, is the last subject the subject of the entire sentence (with the first subject being the subject of an embedded small-clause-like constituent), or is the first subject the subject of the entire sentence, intervening in between a discontinuous embedded clause consisting of the locational predicate (e.g., *l-* or *gayuḷ-*) and

³⁹To be precise, sentences that consist of multiple clauses, like those with “when” adjuncts (§B.6.6.2), will have multiple nominative subjects. What is notable about these sentences is the appearance of two nominative subjects within what appears to be a single clause.

the last subject?

I think it is the former: that these, like Type Ia copular sentences, are subject-final sentences, and the material preceding the subject is a copular complement. In particular, we find the =*a* of embedding after this copular complement when it is complex – that is, when it has an overt subject, as in (232-235) – but not when it lacks an overt subject, as in (227-228). Also, in §4.4.2, we will see some examples in which pronominal subjects are missing after complex copular complements, which is also familiar from Type Ia copular sentences.

That is to say, I think these have a similar overall structure as Type Ia copular sentences, with the primary difference being that predicate inside the copular complement is in active voice and has a nominative subject.

The syntax of the locative copular sentence seen above may shed light on Kwak’wala “where” (§4.4.2) and “when” (§4.4.3) questions, which are otherwise somewhat of a puzzle.

4.4.2 Locative questions

We see in §2.3.5 and §B.7.2 that questioning a patient argument, goal argument, or other non-agent argument usually requires “promotion” of that argument to subject by passivization or a passive-like nominalization. “Where” questions, however, do not require this.

- (236) a. $\dot{w}idas$ $guk^w\acute{o}li?$
 $\dot{w}y=d=as$ $guk^w-l=i?$
WH=DET=2 house-ONGOING=3DIST
“Where do you live?”
- b. $\dot{w}idas$ $\dot{w}\acute{o}ni$
 $\dot{w}y=d=as$ $\dot{w}n=i$
WH=DET=2 hide=3DIST
“Where are you hiding?”
- c. $\dot{w}idas$ $\text{ʔiʔa}\acute{x}li$
 $\dot{w}y=d=as$ $\text{ʔiʔa}\acute{x}-l=i$
WH=DET=2 work-ONGOING=3DIST
“Where do you work?”
- d. $\dot{w}id\acute{o}n$ $le\text{ʔ}e$ $dal\acute{a}ci$
 $\dot{w}y=d=n$ $l=a=i$ $dal-_{w}as-_{h}i$
WH=DET=1POSS PREP=EMBED=3DIST dollar-PLACE-NMZ
“Where’s my wallet?”

If *wi(=d)* meant “is where” the same way that *ʔəngw-* means “is who” or *mas-* means “is what” or *wiʔstw-* means “is what color”, then we would expect a very different structure, in which *gukwəl-* (“to dwell”⁴⁰) and *wan-* (“to hide”) would be nominalized with *-was*, to mean something like “Your dwelling place is-where?” or “Your hiding place is-where?” We would also expect ordinary argument morphology on these stems (like *=iʔs* and *=uʔs* for the 2nd possessive). Overall, we would expect something like the arguments in (230-231).

These differences – *=(a)s* instead of *=uʔs*, a following *=i(ʔ)* – are the hallmarks of a copular structure that we saw in §4.2; indeed, we can see the direct parallelism between locative questions and locative answers.⁴¹

- (237) a. *widas* *gukwəliʔ*
 wy=d=as *gukw-l=iʔ*
 WH=DET=2 house-ONGOING=3DIST
 “Where do you live?”
- b. *hedən* *gukwəliʔ*
 he=d=n *gukw-l=iʔ*
 be.3DIST=DET=1 live-ONGOING=3DIST
 “That’s where I live.”

It is worth noting that while usually there is at least an *l-* (“go”, “now/then”, “at”, probably just “at” here⁴²), sometimes the “predicate” position in the apparent copular complement is simply empty. *=uʔs labasus* (“your running shoes”) in (238) is not a copular complement itself – it has the morphology of an argument – so it is either the copular subject or the embedded subject. Given the sentences above, in which the putative matrix subject was the location and the putative embedded subject was the thing-being-located, *=uʔs labasus* is probably the embedded subject here.

- (238) *widuʔs* *labasusʔ*
 wy=d=uʔs *labasus*
 WH=DET=2POSS rubber.shoes
 “Where are your running shoes?”

⁴⁰This stem also means “village”, but this sentence does not mean “Where is your village?”. This question was used, for example, in the “Animal guessing” game to ask where an animal lives (in the forest, in the water, etc.).

⁴¹This also partly explains what the *d* in *wid* is doing – it does whatever the *d* does in other copular sentences.

⁴²While in many questions we could try to translate it as “Where did *X* go?” or “Where is *X* now?” rather than just “Where is *X*?”, this *l-* is also used in questions that ask about stationary objects like houses or villages (e.g. Boas and Hunt, 1905, p. 144, lines 30-31) where “Where did it go?” or “Where is it now?” would be unlikely interpretations. There is also already a way to say “Where did it go”, using the stem *wawiyaq-*.

4.4.3 Temporal questions

This is also the construction used for “when” questions, with =*laq*^w rather than =*d* indicating that a time is being asked for.

- (239) $\dot{w}ila\check{x}^w\lambda\acute{o}s$ $ne\acute{n}ax^w\lambda i$
 $\dot{w}i=laq^w=\lambda=s$ $ne\acute{n}ak^w=\lambda=i$
 WH=time?=FUT=2 go.home=FUT=3DIST?
 “When are you going home?”

- (240) $\dot{w}ilaq^was$ $h\acute{o}m\acute{a}pi$
 $\dot{w}y=laq^w=as$ $hm\acute{-}ap=i$
 WH=time?=2 eat-consume=3DIST
 “When do you eat?”

- (241) $\dot{w}ilaq^was$ $xusi?$
 $\dot{w}y=laq^w=as$ $xus=i$
 WH=time?=2 rest=3DIST
 “When did you take a rest?”

We can see clearly the parallelism between locative (242a) and temporal (242b) questions below.

- (242) a. $\dot{w}idas$ $\text{?i?ax}\acute{\lambda}i$
 $\dot{w}y=d=as$?i?ax-l=i
 WH=DET=2 work-ONGOING=3DIST
 “Where do you work?”
- b. $\dot{w}ilaq^wnax^wad^{\acute{o}}s$ $\text{?i?a}\acute{x}\acute{\lambda}i$
 $\dot{w}y=laq^w=nax^w a=d^{\acute{o}}=s$ $\text{?i?a}\acute{x}\acute{-}al=i$
 WH=time?=ever=AUG=2 work-ONGOING=3DIST
 “When do you work?”

Like the locative question in (242a), the temporal question in (242b) has a final distal pronoun =*i*, and the second person =*s* rather than the second person possessive =*u?**s*, suggesting that *?i?a**x**al-* is a copular complement rather than a subject, and therefore that this is, like the locative question, a copular question rather than a predicative one.

The copular structure of temporal questions is not always evident, however, since, like locative questions (§4.4.2) and other copular sentences (§4.2.5), the pronominal subject (=i) is

absent when the copular complement is complex.

- (243) w̌ilaq^wλən ʔiti duq^wʔaλəlaλuʔs
 w̌y=laq^w=λ=n ʔit-xʔid dwq^w-gʔaλ-l=(a)λ=uʔs
 WH=time?=FUT=1 again-CHANGE see-discover-ONGOING=FUT=2POSS
 “When will I see you again?”

- (244) w̌ilaq^wnax^was ʔixʔax quʔs didagəʔoʔs
 w̌y=laq^w=nax^w=as ʔixʔax q=uʔs didag=a=uʔs
 WH=time?=ever=2 like for=2POSS drink.tea=INVIS=2POSS
 “When do you like to drink tea?”

- (245) w̌ilaq^wnax^was bag^wəns ʃuʔs gigəʔoʔnuk^wuʔs
 w̌y=laq^w=nax^w=as bk^w-_wns ʃ=uʔs gi-gʔoʔnuk^w=uʔs
 WH=time?=ever=2 man-found.unexpected ACC=2POSS REDUP-parent=2POSS
 “When do you visit your parents?”

One connection between location and time in Kwak’wala is that, at least historically, they can both be referred to using the *-_was* voice (§B.3.4.10). They are not, however, the only types of arguments that *-_was* can promote; Boas noted that “While this suffix designates primarily place, it also has many derived meanings such as time, size, number, way of” (Boas et al., 1947, p. 318). In the following sections, we will see that there are additional arguments, that would ordinarily be promoted using *-_was*, that like location and time *do not* take *-_was* in a Type II copular sentence.

4.4.4 Indefinite predicate copular sentences

Another use of the Type II copular construction is to express that one thing or action is like another along in some manner (e.g., in looks, in behavior, in sound).

(246) *Context: The speaker is describing a cartoon of several pigs eating carrots.*

hiʔhəm̩p̩x̩daʃ^wuʃ ʃ^wa ʃətəm **he** g^wigili **Bugs**
 h̩y̩-h̩m̩-ap=x̩daʃ^w=uʃ ʃ^wa ʃtm **he** ǰ^wi-gil=i **Bugs**
 REDUP-eat-consume=PL=3MED ACC.3MED carrot **be.3DIST INDEF-do=3DIST Bugs**

Bunny

Bunny

Bunny

“They’re eating carrots **like Bugs Bunny does.**”

(247) *Context: In this story, the speaker encountered her father while on a trip to town, but didn’t recognize him at first because she had not seen him dressed in that manner.*

q̩ux̩c̩oluʃ **he** ǰ^welida q̩i̩q̩ɛd
 q̩ux̩-c̩o-l=uʃ **he** ǰ^wi-ał=i=da q̩i̩-q̩i-wad
 dress-in-ONGOING=3MED **be.3DIST INDEF-ONGOING.POS=3DIST=DET REDUP-many-REL**

“He was dressed **like a rich man.**”

This construction is not infrequent in narratives (e.g. Boas and Hunt, 1905); usually it occurs as a relative clause (248-249) but sometimes occurs as a full sentence (250) or as a headless relative clause subject (251).⁴³

(248) wɛ, laʔe lagaʔa laʃida x^wəpisi ʔisəma
 wɛ, la=i laga=a la=ʃ=i=da x^wp=i=s=i ʔism=a
 well, then=3DIST come=A PREP=ACC=3DIST=DET hole=INVIS?=3POSS?=3DIST=? stone=A
 he ǰ^wixs gukwa
 he ǰ^wi=ks gukw=a
 be.3DIST INDEF-manner house=A

“Then they came to a cave in a rock, which is like a house.”

(Boas and Hunt, 1905, p. 70)

⁴³The apparent syntax of the Boas-era examples does not seem to be exactly the same as I have observed, however; the major difference being that the object of comparison in Boas-era examples sentences looks to be a predicate, whereas in my own examples it seems to be a subject.

- (249) *m̄auḥda* *mamgilisəlaḥ* *laḥwa*
m̄as=s=uḥ=da *ma-ma-gil-is-la=ḥ* *la=ḥwa*
 what-??=3_{MED}=DET REDUP-crawl-do-on.underwater.surface?-ONGOING=VIS PREP=ACC.3_{MED}
waḥ, *he* *ḡ^wixs* *q̄alawi?*
wa=ḥ, *he* *ḡ^wi-ks* *q̄alawi*
 river=VIS, be.3_{DIST} INDEF-manner worm
 “What is swimming in the river? It is like worms.” (Lit: “What is swimming in the river, like worms?”) (Boas and Hunt, 1905, p. 102)

- (250) *hel̄ata* *ḡ^wixs* *ʔalk^wa*
he=l̄a=t̄a *ḡ^wi-ks* *ʔalk^w=a*
 be.3_{DIST}=REPORT=but INDEF-manner blood=A
 “...and it looked like blood.” (Boas and Hunt, 1905, p. 99)

- (251) *wē,* *lal̄əʔe* *lixaʔəm* *t̄isəmida* *he* *ḡ^wixs* *w̄alas*
wē, *la=l̄a=i* *lixa=ʔm* *t̄ism=i=da* *he* *ḡ^wi-ks* *w̄alas*
 well, then=REPORT=3_{DIST} only=VER stone=3_{DIST}=DET be.3_{DIST} INDEF-manner big
çik^wa...
çik^wa
 seagull
 “The only stone (there) is like a large bird sitting...” (Lit: “The [one] that is like a bird... is the only stone.”) (Boas and Hunt, 1905, p. 60)

These “resemblance” constructions are built around *ḡ^wy-* stems, which have no direct equivalent in English, but are the non-interrogative counterparts of the interrogative *w̄y-* stems (§B.2.2), and the basis of many abstract nouns like *ḡ^wiʔstəw̄as* (“color”) and *ḡ^wigilas* (“behavior”).

- (252) a. *w̄iḡəm-*
w̄y-(ḡ)m-
 WH-face-
 “what does [one] look like?”
 b. *ḡ^wiḡəm-*
ḡ^wy-(ḡ)m-
 INDEF-face-
 “what [one] looks like”

Although morphologically parallel, *w̄y-* and *ḡ^wy-* stems show different syntactic behavior.

Like other WH elements, *wʷy-* stems serve as predicates of their sentences, as in (253). *ǰʷy-* stems, on the other hand, do not directly predicate; rather, they occur in a copular sentence like that in (254).

- (253) *wiǰəmi* Mike
wi-ǰm=i Mike
 WH-face=3_{DIST} Mike
 “What does Mike look like?”

- (254) *hemən* *ǰʷiǰəmi* Mike
he=ʔm=n *ǰʷi-(ǰ)m=i* Mike
 be.3_{DIST}=VER=1_{POSS} INDEF-face=3_{DIST} Mike
 “I look like Mike.”

We can see in (254) the sequence *ǰʷiǰəmi Mike* seems to parallel the WH question in (253), *wiǰəmi Mike*. This suggests that (254) contains an embedded question-like clause, similar to the embedded clauses proposed above for locative copular sentences (§4.4.1).

It is not clear here whether *=i Mike* is the subject of the embedded clause, with *=ən* being the subject of the matrix clause, or whether *=i Mike* is the subject of the matrix clause and *=ən* the subject of the embedded clause.⁴⁴ Since resemblance is a symmetrical relationship, it is hard to judge whether this is structurally more similar to “I am [what Mike looks like]” or to “Mike is [what I look like]”.

Whichever of *=ən* or *=i Mike* is the matrix subject, and which is the embedded subject, this is another instance in which a matrix subject would need to be coreferent with a non-subject argument of the embedded clause. Like the matrix subjects in §4.4.1, which would need to be coreferent with a location argument, the matrix subjects in these sentences would need to be coreferent with something like a standard-of-comparison argument.

4.4.5 Measure copular sentences

We can also observe this phenomenon with another class of stems in *-was*: “measure abstracts” like *waladʷas* ~ *walayʷas* (“size”), *wasǰəmas* (“length”), and *waxʷəʔas* (“amount”).

Just as we see *ǰʷikdʷas* (“type, kind”) as an abstract noun and *ǰʷiks* (“be like”) as an embedded predicate, or *ǰʷiʔstəwʷas* (“color”) as an abstract noun and *ǰʷiʔstu* (“be colored like”) as an embedded predicate, we can see the measure abstract stems, without *-was*, acting as embedded

⁴⁴I have not managed to elicit a sentence with two full DP arguments, which would make it more clear; speakers have given only tentative attempts and have been hesitant to judge constructed examples.

predicates in measure sentences.

(255) a. $\dot{w}aladʔas$
 $\dot{w}alas-_{w}as$
 big-NMZ
 “size”

b. *Context: We are playing an animal guessing game, in which I am pretending (unknownst to the guesser) to be a mouse. Before guessing correctly, she tries one more question:*

$\dot{w}idas$ $\dot{w}alasi$
 $\dot{w}i=d=as$ $\dot{w}alas=i$
 INDEF=DET=2 big=3DIST
 “What size are you?”⁴⁵

The question in (255b) has the distinctive morphosyntax of a copular sentence, like the use of second-person $=(a)s$ rather than second-person possessive $=uʔs$, and the $=i$ occurring where we might otherwise expect postnominal enclitics. It also shows the distinctive property of Type II copular sentences, that the embedded predicate does not receive the $-_{w}as$ nominalization we might expect, and that the subject would have to be coreferent with a non-subject argument, in this case (like the resemblance sentences in §4.4.4) something like a standard-of-comparison argument.

Like resemblance constructions, this is most often encountered textually in relative clauses.

(256) ... yu $\dot{w}alasu\check{x}da$ $gigəyaca\check{g}a\check{x}s$ $galaʔe$ $\acute{m}ayuləma$
 ... yu $\dot{w}alas=u\check{x}=da$ $gigəyaca\check{g}a=\check{x}=s$ $gala=i$ $\acute{m}ayul-_{w}m=a$
 ... be.3MED big=3MED=DET mouse=VIS=3POSS? first=VIS.DIST bear.child-NMZ=A
 [Then he took out a small dog] “...the size of a mouse when just born.”

(Boas and Hunt, 1905, p. 38)

We can also see $\dot{w}a\check{x}a-$ (“amount”) and $\dot{w}as\check{g}ə\acute{m}-$ (“length”) used in this manner.

(257) a. $\dot{w}a\check{x}əʔas$
 $\dot{w}a\check{x}a-_{w}as$
 number-NMZ
 “amount”

(FirstVoices, 2009)

⁴⁵Although $\dot{w}alas$ is also the stem for “big”, this is not just “Are you big?”, which is $\dot{w}alasmase$.

- b. $\dot{w}i\lambda i$ $\dot{w}a\check{x}a\lambda\acute{o}s$ $\text{?}\acute{o}\check{x}\text{?}\acute{e}\check{x}s d\acute{o}w\acute{a}s$
 $\dot{w}i=\lambda=i$ $\dot{w}a\check{x}a=\lambda=s$ $\text{?}\acute{o}\check{x}\text{-?}\acute{e}\check{x}s d\text{-}\dot{w}=a s$
 INDEF=FUT=3DIST number=FUT=2POSS do-want-PASS?=2POSS
 “What amount is wanted by you?” (Boas et al., 1947, p. 205)

- (258) a. $\dot{w}as\check{g}\acute{o}m\acute{a}s$
 $\dot{w}as\text{-}\check{g}m\text{-}w\acute{a}s$
 size-round?-NMZ
 “length” (FirstVoices, 2009)

- b. $\dot{w}idi$ $\dot{w}as\check{g}\acute{o}mi$
 $\dot{w}i=d=i$ $\dot{w}as\check{g}m=i$
 INDEF=DET=3DIST measure=3DIST
 “How long is it?” (Boas et al., 1947, p. 205)

- c. $la=l'$ yu $was\check{g}\acute{o}mu\check{x}da$ $hi\lambda\check{x}$ $\lambda o\text{?}sa$
 $la=l'$ yu $was\text{-}\check{g}m=u\check{x}=da$ $hi\lambda=aq$ $\lambda a\check{x}^w\text{-}h\acute{s}=a$
 then=REPORT be.3MED size-round?=3MED=DET correct=VIS stand-outside=ACC.3MED
 $\text{?}ali\dot{w}asi$
 $\text{?}ali\dot{w}asi$
 spruce
 “...she grew to the size of a medium-sized spruce tree.”
 (Boas and Hunt, 1905, p. 434)

It would appear, then, that the copula must have some sort of access to the degree variable of scalar predicates, in order to mean something along the lines of “To what degree is it long?”.

In summary, there are at least three kinds of copular sentences that seem to have an unusual structure in common, and an unusual semantics in common. In each – at least, in those in which we can observe the entire structure – the general form seems to be something like (259)⁴⁶, where the outer subject is being equated not with the embedded predicate *P*, and not with the subject of *P*, but with some variable element (a location, a time, a standard-of-comparison or WH-like variable) associated with the embedded predicate. This association – wherein a higher subject is interpreted as an argument of a lower predicate, but is *not* interpreted as that predicate’s subject – is surprising; we would ordinarily expect *P* to have an appropriate voice suffix to allow this

⁴⁶If we assume the double-layer hypothesis in §4.3.7, this structure would be something like:

(i) [[\emptyset [t_i [*he*- [*P S2*]]]] *S1_i*]

argument to be its subject.

(259) [[*he-* [S2 P]] S1]

This variable element is not arbitrary, however – it is not just that any argument of *P* can be equated with *S1*. Rather, in each case, the element in question is the one targeted by the *-was* voice (§B.3.4.10).

	<i>l-</i>	be at <i>x</i> or go to <i>x</i>
	<i>ləʔas</i>	one's location/destination (the <i>x</i> such that one is at <i>x</i> or goes to <i>x</i>)
	<i>gayuʃ-</i>	be from <i>x</i>
	<i>gayulas</i>	one's origin (the <i>x</i> such that one is from <i>x</i>)
	<i>ǵ^{wi}ʔstw-</i>	be of color <i>x</i>
(260)	<i>ǵ^{wi}ʔstəwas</i>	one's color (the <i>x</i> such that one is of color <i>x</i>)
	<i>ǵ^{wi}gil-</i>	do <i>x</i>
	<i>ǵ^{wi}gilas</i>	one's behavior (the <i>x</i> such that one does <i>x</i>)
	<i>walas-</i>	be big to the degree <i>x</i>
	<i>waladwas</i>	one's size (the <i>x</i> such that one is big to the degree <i>x</i>)
	<i>wasgəm-</i>	be long to the degree <i>x</i>
	<i>wasgəmas</i>	one's length (the <i>x</i> such that one is long to the degree <i>x</i>)

So, the matrix subject is not just coreferential with an arbitrary argument, but with a specific one: whatever argument would have been picked out, in an ordinary relative clause, by the *-was* voice suffix.

I will not be able to address, here, by what mechanism this coreference occurs – a sort of A-movement restricted to occurring in copular complements? – and why it appears to be restricted in such a way; these are important future research questions for Kwak'wala syntax but are somewhat outside of the scope this investigation. It is important, however, to show that these sentences have a distinct form – distinct from predicative sentences, and distinct from Type I copular sentences – that these differences are systematic rather than exceptional, and that my observations of Type I sentences in §4.2, §4.2, and Chapter 6 do not necessarily apply to every copular sentence in the language.

4.5 Negative existential sentences

Another sentence type that shows the copular pattern consists of “there isn't any” sentences expressed as *kəyos* (261). *kəyos* serves as the sentential predicate, but what follows is neither

an ordinary predicate nor an ordinary argument. Rather, it appears to be the same type of phrase as the complement of a copula (§4.2.6).

- (261) a. kəyos məmima laxuɣda liʔloʔsɣ
 kyus məmima l=(a)ɣ=uɣ=da lɣ-λαɣ^w-_hs=iq
 none leaves PREP=ACC=3MED=DET REDUP-stand-on.ground=INVIS
 “There aren’t any leaves on those trees.”
- b. kəyos ləʔeʎa,
 kyus l-_wiʎ=a,
 none go-into.house=A
 “*No one went inside.*”
- c. kəyos ʔixʔageʔsuɣ
 kyus ʔixʔak-_waɣ=s=uɣ
 none like-NMZ=3POSS=3MED
 “*There’s nothing he/she likes [to eat].*”
- d. kəyosən həmɣʔicəwa
 kyus=n həm-ɣʔid-sw=a
 none=1 eat-CHANGE-PASS=a
 “*I haven’t eaten anything.*”

These are not just numeral sentences; we can see that the quantified arguments in (262) and (263) are inflected like subjects, with pronominal determiners, postnominal determiners, and subject-like possessive inflection.

(262) *Context: The speaker is describing a cartoon picture.*

yudəx^wuɣ ɣaqaɣsa waci
 yudx^w=uɣ ɣaq=a=q=sa was-_hi
 three=3MED bone=a=VIS=3POSS dog-NMZ
 “The dog has three bones.”

(263) məʔluʔs piʔpəʎəʔumas
 mʔl=uʔs pɣ-pʎ-ʔumas
 two=2POSS REDUP-fly-thing
 “*You have two birds.*”

In *kəyos* sentences, on the other hand, the pre- and post-nominal determiners are missing and

the “possessive” inflection is the same mix of morphology that we see in copular complements

- (264) a. k̇əyosən dala
 k̇yus=n dala
 none=1 money
 “I don’t have any money.”
- b. k̇əyosəs dala
 k̇yus=s dala
 none=2 money
 “You don’t have any money.”
- c. k̇əyos dalasuḥ Jon
 k̇yus dala=s=uḥ Jon
 none money=3POSS=3MED Jon
 “Jon doesn’t have any money.”

This can be seen clearly in the difference of the possession of *həmeʔ* (“food”) in (265a), compared to its usage in (265b).

- (265) a. k̇əyos **həmeʔsuḥ**
 k̇yus **hṁ-ayʔ=s=uḥ**
 none **eat-NMZ=3POSS=3MED**
 “He doesn’t have any food.” (Rough lit: “There isn’t any **his food**.”)
- b. məçali **həmeʔs** Katie?
 məs-hal=i **hṁ-ayʔ=a=aʔ=s** Katie?
 what-kind=3DIST **eat-NMZ=a=INVIS=3POSS** Katie?
 “What does Katie eat?” (Lit: “**Katie’s food** is-what?”)

4.6 Other uses of copulas

Copulas are used in a wide variety of conventionalized constructions.

4.6.1 he- lagil

he- frequently appears in the *he- lagil* (“that’s why” or “therefore”) construction. This seems to be similar to the English sentence “That is the reason...”, equating the distal subject (expressed

only through the copular agreement) and the copular complement being “the reason that...”.

- (266) *lawisʔidi, heʔəm lagɪs təpi ʃa kʷəʔsta*
lawis-xʔid=i, he=ʔm la-gɪɬ=s tɸ-xʔid ʃa kʷ-ʔsta
 angry-CHANGE=3DIST, be.3DIST=VER go-reason=3POSS break-CHANGE ACC sit-in.water
 “He was angry; that’s why he broke the cup.” (Lit: “...that is his reason for breaking the cup.”)

We do not need any special explanation of these sentences; “That is the reason” is an equative sentence and we would expect it to have this form.

4.6.2 *hemas*

There is also a special presentational construction, which is used in cases where we might say “There is” in English, consisting of a copula and an enclitic *=as*, followed by what appears to be a subject. Note that while the English “there is” construction has the what-there-is constituent as a copular complement and has only an expletive subject “there”, this construction appears only to have a subject and lacks a copular complement. *=as* is in the appropriate position to be the copular complement, so perhaps it is an expletive copular complement the way “there” is the English expletive subject? In any case, I gloss it here as PRSNTV, for “presentative”.

- (267) *Context: A speaker is describing a picture to another speaker.*

hemasida liʔlaʔs
he=m=as=i=da λy-λa-hs
 be.DIST=VER=PRSNTV=3DIST=DET REDUP-stand-on.ground
 “There are some trees.”

- (268) *Context: A speaker is describing a picture to another speaker.*

hemasida busi, dʒəlxʷsəma ʃe siləm
he=ʔm=as=i=da busi, dʒəlxʷ-səma ʃ=i siləm
 be.3DIST=VER=PRSNTV=3DIST=DET cat, run-after ACC=3DIST snake
 “There’s a cat chasing a snake.”

This *=as* is not limited to the distal copula; in (269) it occurs with the medial copula, and below in (270) we will observe it on the exclusive copula.

(272) *Context: We are role-playing being in a restaurant, but it happens that the only food items in the room are oranges and crackers.*

welʔəms ʔəʃ gada ʔayandʔis λuʔ gada kəlagas
 wel=ʔm=s ʔʃ ga=da ʔayandʔis λw̄ ga=da klagas
 can=VER=2 DO 3PROX=DET orange and 3PROX=DET crackers
 “You can have oranges and crackers.”

(273) məcafi ʃw̄ənukw̄εʔs Jon, ǧənabidu λuʔ wisabidu
 məs-haʔi ʃw̄nukw̄=a=aʔs Jon, ǧna-bidu λw̄ wisa-bidu
 what-kind=3DIST child=POSS=INVIS=3POSS Jon, baby.girl-DIMIN and boy-DIMIN
 “What’s Jon’s baby, little girl or little boy?” (lit: “little girl and little boy”)

(274) məcafiʔs ʔəʃʔexsdəsəw̄oʔoʔs laʃwa ʔigw̄ənuʃ
 məs-haʔi=iʔs ʔʃ-hEXsd-sw̄=a=uʔs l=(a)ʃwa ʔikw̄-wnu=q
 what-kind=3DIST=2POSS do-want-PASS=INVIS=2POSS PREP=ACC seagull-NMZ=VIS
 λəw̄uʃda ʔəldʔi
 λw̄=uʃ=da ʔls-wi
 and=3MED=DET flesh-NMZ
 “Which did you want, the egg [sandwich] or meat [sandwich]?” (lit: “egg and meat”)

It is also possible to make clear the disjunctive nature of the choices (that is, that it means “or” rather than just “and”) by using *helaʃ*, the distal copula plus the hypothetical enclitic =*laʃ*, followed by the second option expressed as a subject.

(275) a. higaxəsʔəm həmeʔsida k̄utəla
 hig=(a)XS=ʔm hm-aȳ=s=i=da k̄utla
 only=MODAL=VER eat-NMZ=3POSS=3DIST=DET salmon
 “She might only eat fish...”

b. λuʔ helaʃida qaqoʔo
 λw̄ he=laʃ=i=da qaqaʔu
 and be=hyp=3DIST=DET chicken
 “...or chicken.” (Rough lit: “...and chicken might be it.”)

- (276) ?əxʔeχsdaṁasi ǰa kafi luʔ helaχida diy
 ?χ-hεχsda=?m=a=s=i ǰa kafi λw̄ he=laχ=i=da diy
 do-want=VER=QUES=2=QUES ACC coffee and be=hyp=3DIST=DET tea
 “Do you want coffee or tea?” (Rough lit: “Do you want coffee, and tea might be it.”)

It is worth noting, however, that although the *helaχida* construction looks like a clause, this is not a conjunction of clauses (λw̄ is not used for clause conjunction), and it even seems like the sentence can continue, as it does in (277).

- (277) ?əxʔeχsdaṁaseχa Canucks luʔ helaχida Penguins ǰa
 ?χ-hεχsda=?m=a=s=e=χa Canucks λw̄ he=laχ=i=da Penguins ǰa
 do-want=VER=QUES=2=QUES=ACC Canucks and be=hyp=3DIST=DET Penguins ACC
 dulo
 dulo
 win

“Do you want the Canucks or the Penguins (lit: and the Penguins might be it) to win?”

To some extent, it seems like *luʔ helaχida* is just a conventionalized and unanalyzed expression of “or”; we can note above that *Canucks* does not take =*da* (because it is a proper name) whereas *Penguins* has a =*da* that would otherwise not be there.

Sometimes the hypothetical *q=uʔ* (“if”, “what if”) is encountered instead of λw̄.

- (278) *Context: We are wondering what it making so much noise in the next room.*

yuwuχda busi quʔ helaχida w̄aci
 yu=uχ=da busi q=uʔ he=laχ=i=da w̄as-hi
 be.3MED=3MED=DET cat for=hyp be.3DIST=HYP=3DIST=DET dog-NMZ
 “It’s the cat or the dog.” (Rough lit: “It’s the cat, what if it’s the dog.”)

Note also that the copula used seems to be *he* regardless of the deictic category of the other disjunct, suggesting again that *helaχida* might be an unanalyzed fixed expression.

In the “or not” construction, the copula is not necessary; *kiʔs* alone seems to suffice (279).

- (279) yəx^waxəsʔəmλi luʔ kiʔslaχ yəx^walaχ
 yx^wa-xS=?m=λ=i λw̄ kiʔs=laχ yx^wa=laχ
 dance-modal=VER=FUT=3DIST with not=hyp dance=hyp
 “She might dance or she might not.”

4.7 Summary

Boas et al. (1947, p. 205) describe Kwak’wala as a language without a “be”-like verb; on the basis⁴⁷ of its non-appearance with noun and adjective predicates. This is not, however, the only function of copulas; in particular, many languages – including the Southern Wakashan languages (Davidson, 2002) – lack copulas in predicative sentences but do have copulas (or at least copula-like elements) in equative sentences.

When we examine Kwak’wala equative sentences, we find a distinct structure, in which one of five elements (*nugwa-*, *su-*, *ga-*, *yu-*, and *he-*) precedes (up to) two overt constituents (§4.2). One of these has the form of a nominative subject (§4.2.5), and agrees with the initial element; the second has distinct morphology unlike either subjects or predicates (§4.2.6). There is also a variant of this structure, the “cleft”, in which the subject comes first; I analyze this as a variety of inverse equative sentence (§4.3).

Once we have identified the distinctive morphosyntax of the copular sentence, we can find it in various other constructions in the language (§4.6), including the subject-associating exclusive operator *hig-*, the negative quantifier *kəyos* (“no, none”) (§4.5), and some kinds of questions (especially locative and temporal questions) (§4.4.2, §4.4.3).

It is important to distinguish two basic types of copular sentences, one of which (“Type I”) involves the coreference of the subject with what would be the subject of the embedded predicate (§4.2), and the other of which (“Type II”) involves the coreference of the subject with a different argument of the embedded predicate: a location, time, or standard-of-comparison argument (§4.4).

While I do not offer here a complete account of Kwak’wala sentences – how exactly this coreference is achieved, why elements occur in the particular order they do, how they can or cannot be derived from a universal predicative “base” sentence – it is important to emphasize that these sentences are systematic and their forms are predictable. That is, sentences beginning with these elements – *nugwa-*, *su-*, *ga-*, *yu-*, *he-*, *hig-*, *wi-*, and *kəyos* – have, since the first descriptions of Kwak’wala, confounded analyses or appeared to have structures or interpretation that defied expectations (Hall, 1888a; Boas et al., 1947; Anderson, 1984; Chung, 2007; Sherer, 2014). In this chapter, I establish that these are not isolated anomalies; sentences that begin with these elements have a distinctive structure unlike that of ordinary predicative sentences. Some aspects of these sentences (like the morphosyntactic expression of subjects) are familiar from predicative sentences, other aspects (like the morphosyntactic expression of copular complements, and the possibilities for argument coreference within copular complements) are

⁴⁷Boas does not explicitly collect a body of evidence against its existence, but this claim is almost certainly based on its non-appearance in noun- and adjective-predicate sentences.

unfamiliar, and if these sentences are analyzed as if they are predicative sentences, we can get unexpected, anomalous, or confounding results.

This is important in investigating focus, because two forms of equative sentence (the “canonical” Type Ia and “cleft” Type Ib) have a focus interpretation pattern reminiscent of the predicative sentence patterns seen in §3.5. Recognizing the difference between these two sentence types allows the possibility of considering what nominal predication constructions and clefts have in common (that they involve non-verbal predication structures) despite the differences in their morphosyntactic expression (because one is a type of predicative sentence and the other a type of equative sentence).

Part III

Focus

Chapter 5

A formal model of focus

5.1 Introduction

In this chapter, I present a simple formal model of focus and congruence to underlie the observations in the chapters that follow.

If you are primarily interested in the descriptive facts of Kwak’wala focus, rather than the implementation of these facts within formal semantics, it is entirely safe to skip this chapter and move on to Chapter 6. The informal introduction given in §1.6 should be sufficient for understanding the descriptive parts of the chapters that follow.

The novel contribution of this chapter is the “generalized congruence” model in §5.3. This model is intended to be the simplest model of congruence that can handle the range of data in this investigation; it makes use of only one contextual variable, *C*, and only one speech-act operator, SAY, and is intended to handle a variety of “congruence” relationships (question-answer congruence, assertion-assertion congruence, congruence with several questions or a mixed set of questions and assertions) using a uniform mechanism.

The primary benefit of such generality, for this project, is that the investigation of focus in an unfamiliar language will generally have to use utterance-utterance congruence patterns as the primary means of determining which sentential elements are foci. The wider the range of utterance-utterance patterns that the model can directly handle, the wider the range of data that can be used to pinpoint foci without the need to accommodate implicit discourse objects.¹

I adopt the particular synthesis that I do, here, because some of the explanations in the

¹While accommodation cannot altogether be dispensed with – many and perhaps most “questions” that focus invokes are implicit – minimizing the need for it is of practical value when working on an unfamiliar language. When we observe a pair of sentences like those in (i) in an unfamiliar language, it is of value to be able to say that “cat” has to be a focus in (i.b) by virtue of the prior sentence in (i.a), rather than say that “cat” has to be a focus because the speaker has in mind an implicit question “What is chasing the rabbit?” or “In which picture is what chasing the rabbit?”.

chapters that follow (particularly in Chapters 7 and 8) require a formalism that is relatively explicit about particular topics:

- How does one calculate the discourse felicity of an utterance with a focus operator like “only”? Do the felicity calculation and the focus operator both utilize the same focus?
- What happens when two discourse considerations (e.g., a question and a contrasting assertion) both condition the focus expression of an utterance?
- How are polarity contrasts represented, and contrast sets in which there are both polarity and non-polarity components?

Considerations like the above would not necessarily pose problems for other models, but the answers to the above questions are sometimes not explicit or fully worked out. This chapter attempts to offer a synthesis model of focus that makes the above answers explicit.

The model presented here thus makes use of insights from many other theories:

- Like many models of focus (e.g. Rooth, 1992; Roberts, 2012; Büring, 2007), it models focus as introducing a kind of presupposition.
- It makes use of the foci-as-variables model introduced by Kratzer (1991) and used in Wold (1996), Schwarzschild (1999), and Beck (2006).
- Although it does not make use of the exact semantics of Groenendijk and Roelofsen (2009), it likewise attempts to model questions and assertions uniformly; the question/assertion distinction, although certainly necessary for accounting for other aspects of language, is not invoked here to account for any aspect of focus.
- Like Drubig (1994), Wagner (2006), and Krifka (2006), operators like “only” do not associate directly with foci, but instead associate with potentially larger phrases (“focus phrases”) that contain foci.

On the other hand, there are various important considerations that would be necessary for a true cross-linguistic theory of focus, that I simply gloss over.

-
- (i) *Context: Two people are considering a find-the-difference puzzle. Each person can only see one of the pictures, and they are trying to cooperate to identify all the differences between their pictures*
- a. “The snake is chasing a rabbit.”
 - b. “The cat_F is chasing a rabbit.”

Even if speakers do have such a question in mind, each such question accommodation that is posited takes the conclusion further from the observable data. Although accommodation is often necessary, the fewer accommodations we have to posit, the lighter the argumentative burden on the investigator.

- Unlike the systems presented in Roberts (2012) and Beaver and Clark (2008), the model presented below is only intended to capture what speakers are expressing with focus expressions, and why some focus expressions are felicitous or infelicitous. It is not intended to be a general model of informative interaction; I do not attempt to model what the interlocutors know or want to know, the conditions under which an answer is relevant to a question, or other communicative goals of speakers.
- It also does not attempt to provide a realistic account of English focus accent or the relationship of accent to *F*-marking, both of which are more complicated than the simplistic correspondences assumed here. The English data here are just meant to provide motivation for, and illustration of, the system; I do not mean to say that there is nothing more to English focus accent than the snapshot presented here.
- It can only express congruence relationships between whole utterances, and does not include mechanisms to express congruence correspondences that involve subsentential phrases, as Schwarzschild (1999), Büring (2007), and Beaver and Clark (2008) do.

While these considerations are all important, they are not necessary to handle the bulk of the Kwak’wala data presented here.

5.2 Implementing focus formally

5.2.1 Alternative Semantics and Structure Meanings

There are various ways of representing and constructing focus alternatives within formal semantics.

- (280) a. “Alternative Semantics” (including Rooth, 1985; Büring, 2003; Beaver and Clark, 2008), in which the focus alternative sets of sentential elements are accessible as a secondary semantic value, which is built compositionally in parallel with the ordinary semantic value.
- b. A variant of Alternative Semantics based on variable substitution (Kratzer, 1991; Wold, 1996; Beck, 2006)², in which foci contribute variables to the focus semantic value, which are bound by c-commanding operators.

²The compositional aspects of this semantics are also used in Schwarzschild (1999), although the resulting semantic objects are used in a somewhat different manner.

- c. “Structured Meanings” (including Jacobs, 1983; von Stechow, 1991; Krifka, 1991), in which the focused element itself and the non-focused background are available as elements of a semantic object that represents both, like a $\langle \text{background, focus} \rangle$ ordered pair.

Conceptually, each of these models represents in a different form the same idea, that the semantics of a focused sentence involves some manner of *pairing* of a question and an answer (Beaver and Clark, 2008, p. 28). That is, that the semantics of (281b) pairs, in some manner, the semantics of “Alice raises chickens” with the semantics of “Who raises chickens?”.

- (281) a. “Who raises chickens?”
 b. “ALICE raises chickens.”

For “Alternative Semantics” models, these questions are Hamblin-style (1973) sets of answers³, along the lines of $\{ \textit{Alice raises chickens, Bernie raises chickens...} \}$, and are accessible as a secondary semantic denotation. For “Structured Meanings” models, these questions are properties, along the lines of $\lambda x.x \textit{ raises chickens}$, and are accessible as one of the components of the structured meaning. Semantic “pairing” of this sort allows us to express congruence straightforwardly: once both questions and answers contain semantic values of the same semantic type, congruence can be expressed via whatever containment relationship (subsethood, entailment, etc.) is appropriate for that type.

The most important difference between the Alternative Semantics varieties and the Structured Meanings varieties involves *which* two meanings are represented semantically. Informally speaking, the paired meaning can include the question (282a), the answer of the question (282b) or the short answer (282c).

- (282) a. $\llbracket \text{Who raises chickens} \rrbracket$
 b. $\llbracket \text{Alice raises chickens} \rrbracket$
 c. $\llbracket \text{Alice} \rrbracket$

Alternative Semantics theories essentially represent focus meanings as a pair of (282a) and (282b); Structured Meanings theories represent focus meanings as a pair of (282a) and (282c). These representations are not, however, of equal power: (282a) and (282c) together can derive the meaning in (282b), but (282a) and (282b) cannot derive the meaning in (282c). That is

³Since Hamblin (1973) there has been debate about what, exactly, is in this proposition set that corresponds to a question. Hamblin (1973) identified it as the set of partial answers to the question, Karttunen (1977) as the set of true answers, and Groenendijk and Stokhof (1984) as the set of complete answers. I will treat these sets as Hamblin sets, but with potentially plural individuals, as Rooth (1985) does; Beaver and Clark (2008) term these “Rooth-Hamblin sets”. (When illustrating alternative sets, however, I will often leave the answers with plural individuals implicit, for brevity.)

to say, Structured Meaning theories offer operators that utilize focus an additional piece of information that Alternative Semantics theories do not (Krifka, 1991; Rooth, 1996; Beaver and Clark, 2008).

For the semantic representation of focus itself – that is, “focus” in the sense that I used in §1.6, the minimal variation between discourse-relevant alternatives – I have chosen a Kratzer-style (1991) Alternative Semantics model. I should note, however, that my assumptions about operator association are closer to the “hybrid” Structured Meaning account in Krifka (2006), in which operators are not associated with foci themselves (in the Alternative Semantics sense), but rather with larger phrases that contain foci.

5.2.2 Alternatives as variables

As noted above, “Alternative Semantics”-type models of focus treat a phrase like “ $Alice_F$ ” as if it has two different values. Many semantic phenomena only involve the ordinary denotation of “Alice”, but some semantic operators (like “only”) treat “Alice” as if it were a variable, ranging over a set of alternatives like {Alice, Bernie, Chris, ...}. Allowing that there be two different denotations of “Alice” allows the ability to treat “Alice” as variable for some purposes while still having it refer to Alice for most purposes.

In what follows, I adapt Wold’s (1996) adaptation of Kratzer’s (1991) alternative semantics, which represents quite directly the intuition above that foci are variable or not depending on the needs of semantic calculations.

5.2.2.1 Ordinary variables

By way of introduction, consider the difference between how ordinary terms (like “Alice” in (283)) and distinguished variables, like the variables introduced by “she” in (284), receive values. Whereas “Alice” is assumed here to have a fixed value, *Alice*, the value of “she” might vary over *Alice*, *Bernie*, *Chris*, etc. In this model, denotations are relativized to an assignment function g , which assigns values to indexed variables. If the assignment function g lacks the appropriate index, or some property of the pronoun (like gender or deixis) is unfulfilled, the variable is undefined.

- (283) a. $\llbracket \text{Alice} \rrbracket^g = \text{Alice}$
 b. $\llbracket \text{Alice raises chickens} \rrbracket^g = \lambda w. \text{that Alice raises chickens in } w$

$$(284) \quad \text{a. } \llbracket \text{she}_1 \rrbracket^g = \begin{cases} g(1), & \text{if } 1 \in \text{Dom}(g) \wedge g(1) \text{ is female} \\ \text{undefined}, & \text{otherwise} \end{cases}$$

$$\text{b. } \llbracket \text{she}_1 \text{ raises chickens} \rrbracket^g = \begin{cases} \lambda w. \text{that } g(1) \text{ raises chickens in } w, & \text{if } 1 \in \text{Dom}(g) \\ \quad \wedge g(1) \text{ is female} \\ \text{undefined}, & \text{otherwise} \end{cases}$$

For example, if the assignment function g were that represented in (285), the resulting denotations would be those in (286).

$$(285) \quad g = \left\{ \begin{array}{l} \langle 1, \text{Alice} \rangle \\ \langle 2, \text{Dylan} \rangle \\ \langle 3, \text{Bernie} \rangle \\ \dots \end{array} \right\}$$

$$(286) \quad \text{a. } \llbracket \text{she}_1 \rrbracket^g = \text{Alice}$$

$$\text{b. } \llbracket \text{she}_1 \text{ raises chickens} \rrbracket^g = \lambda w. \text{that Alice raises chickens in } w$$

For WH elements like “what”, I adapt the account in Beck (2006), which treats WH elements as indefinites that contribute a variable to the “focus semantic value”. However, as this particular model does not distinguish a special focus assignment function (unlike Kratzer, 1991; Beck, 2006), there does not end up being a significant difference within this model between “what” and other pronouns.⁴

$$(287) \quad \llbracket \text{what}_i \rrbracket^g \stackrel{df}{=} \begin{cases} g(i), & \text{if } i \in \text{Dom}(g) \wedge g(i) \text{ is non-human,} \\ \text{undefined}, & \text{otherwise} \end{cases}$$

Finally, disjunctions have likewise been treated as consisting of sets of alternatives (Zimmermann, 2000; Simons, 2005; Alonso-Ovalle, 2006; Groenendijk and Roelofsen, 2009; AnderBois, 2011); within this variable-binding model, a disjunction could be treated as indefinite with a restricted domain, closed by existential quantification by a higher operator. That is, in the same way that “she” is restricted to a particular set of entities, “ α or β ” is restricted to entities in the set $\{\alpha, \beta, \{\alpha, \beta\}\}$.

⁴This is not to say that there are no differences between WH elements and pronouns – there are certainly syntactic, semantic, and pragmatic differences – but for the purpose of the model I will treat them similarly.

(288) If $\alpha = [\beta \text{ [or}_i \gamma]]$, then

$$\llbracket \alpha \rrbracket^g \stackrel{df}{=} \begin{cases} g(i) & \text{if } g(i) \in \llbracket \beta \rrbracket^g \oplus \llbracket \gamma \rrbracket^g \\ \text{undefined,} & \text{otherwise} \end{cases}$$

A uniform means of generating questions and disjunctive alternatives becomes important when we consider the semantics of disjunctive yes/no questions (i.e., “Are you happy or sad?”) in §8.4.4.

I will call all of the above **O-variables** (for “ordinary”), and indices corresponding to them **O-indices**.

5.2.2.2 Focus variables

In this system, foci (in the Alternative Semantics sense) are treated as a special kind of variable, bound by higher operators, whether those operators are overt like “only” or covert like, say, an ASSERT operator.⁵

- (289) a. Bernie only₁ thought that Alice_{F₁} raised chickens.
 b. ASSERT₁(Alice_{F₁} raised chickens)

When the domain of the assignment function g contains the appropriate index, the focus receives its value from g ; otherwise, the focus just denotes its ordinary denotation.

$$(290) \quad \llbracket \beta_{F_i} \rrbracket^g \stackrel{df}{=} \begin{cases} g(i), & \text{if } i \in \text{Dom}(g) \\ \llbracket \beta \rrbracket^g, & \text{otherwise} \end{cases}$$

In other words, a focus has some of the properties of a fixed expression like “Alice”, in that it has a default value, but also has some of the properties of a variable expression, like “who”, in that it can have a variable interpretation when a higher operator binds it. This lets us express formally the informal intuition in §1.6, that “Alice_F” can be a variable or not, depending on what is being done with it.

It should be emphasized that the equivalent of “ordinary semantic values” and “focus semantic values” in a Wold-style (1996) system are not different “levels” of denotation or different types; they just correspond to different ways of calculating the denotation of a phrase, relative to a richer or poorer assignment function g .⁶ Since ordinary and focus semantic values are the

⁵As it happens, I do not end up binding the foci themselves with overt focus operators, adopting instead a model in which focus operators bind larger “focus phrases” (§5.6).

⁶It should be noted that in one direction this model has more expressive power than standard Alternative Semantics models or the binding models of Kratzer (1991) or Beck (2006), as noted in Wold (1996), but in another direction its expressive power is more limited. The standard models can define different ordinary and focus seman-

same type of values, no additional composition rule is necessary to compose the focus semantic values of larger constituents like (291); they are simply composed like any other denotation.

$$(291) \quad \llbracket \text{Alice ordered fried chicken}_{F_1} \rrbracket^g \\ = \begin{cases} \lambda w. \text{that Alice ordered fried } g(1) \text{ in } w, & \text{if } 1 \in \text{Dom}(g) \\ \lambda w. \text{that Alice ordered fried chicken in } w, & \text{otherwise} \end{cases}$$

Note that β in (290) can be either simple or complex; both trivial (291) and nontrivial (292) constituents can receive focus indices, resulting in different focus denotations.

$$(292) \quad \llbracket \text{Alice ordered [fried chicken]}_{F_1} \rrbracket^g \\ = \begin{cases} \lambda w. \text{that Alice ordered } g(1) \text{ in } w, & \text{if } 1 \in \text{Dom}(g) \\ \lambda w. \text{that Alice ordered fried chicken in } w, & \text{otherwise} \end{cases}$$

I will term these variables **F-variables**, and indices corresponding to them **F-indices**.

5.2.2.3 Distinguishing O- and F-variables

It is clear that O-variables and F-variables are not the same “type” of variable, in that the two types cannot function as the other type. If there were no difference, it would be possible, in the congruence system that will follow in §5.2.4, to answer any question with an *unaccented* O-variable.

- (293) a. “Who ordered chicken?”
 b. #“Someone₁ ordered chicken.”

Meanwhile, it would be possible to bind F-variables like any variable. This would lead to inappropriate interpretive possibilities for sentences like (294), in which the quantifier binds the F-variable, and the alternatives to Alice are thereby provided by the quantifier rather than the context.

- (294) $\llbracket \text{Each detective} \rrbracket_1$ suspects that only ALICE_{F_1} is innocent.
 \neq For each detective x , x suspects that Alice is innocent and x is not innocent.

tic definitions for any element, since $\llbracket \alpha \rrbracket^F$ and $\llbracket \alpha \rrbracket^O$, or $\llbracket \alpha \rrbracket^g$ and $\llbracket \alpha \rrbracket^{g,h}$, can always be distinguished. However, if the only difference between the OSV and FSV is a matter of whether an index is in g , then we can only define different OSVs and FSVs for elements that bear (or otherwise have access to) that index. This becomes a matter of potential importance if operators are implemented in such a way that they do not have direct access to the focus index (§7.5.4, §8.6).

So O-variables and F-variables have to be segregated in some way, in order that the congruence calculation not bind O-variables, and ordinary variable-binders like quantifiers do not bind F-variables. *How* this is to be done, however, raises some questions that are somewhat beyond the scope of what I can argue from my data.

For example, the traditional way to segregate focus variables from ordinary variables within a variable-binding focus model is to handle them via different assignment functions: g for ordinary variables, and a second assignment function h for focus variables, as in Kratzer (1991). It is difficult *a priori*, however, to choose exactly which kinds of variables should receive their interpretations through which assignment function. Beck (2006), investigating interference effects between WH elements and foci, models this interference by treating both kinds of variables as receiving their interpretation through the assignment function h . However, Roberts (2012) shows that accounting for the discourse contribution of foci in questions (e.g., “And what did CHRIS order?”) requires being able to distinguish between WH and F variables.

Meanwhile, contrastive topics, which I will consider briefly in §5.5, are, in the sense used in §5.2.2.2, also F-variables, in that they vary between two interpretations (their ordinary interpretation and a variable interpretation) depending on the nature of the semantic calculation. They cannot, however, be treated as indistinguishable from F-variables when considering their discourse contribution. Do we need a third assignment function just to distinguish these?

These are theoretically important considerations, but determining exactly which of the four potential variable types (ordinary non-WH, WH, F, and T[opic]) are associated with which assignment functions is somewhat beyond the scope of investigation here, and presupposing a particular segregation might be premature.⁷ I therefore just leave this concern unaddressed, and adopt a single undifferentiated assignment function g , even though this would technically allow the expression of absurd sentences like (294). Different types of variables must still be distinguished, since I will propose operators like SAY that have to be able to distinguish them, but I leave open exactly what mechanism distinguishes them.

5.2.3 Existential closure

As noted in §1.6.5, the characterization of congruence relationships (like question-answer congruence) can be expressed as a relationship between the semantic values of the utterances. We might, for example, express the relationship between the question and answer in terms of

⁷For example, an important part of Kwak’wala focus morphology, $=?m$ (Chapter 8), is sensitive to polar contrasts whether they occur in question alternative sets or focus alternative sets. Whether or not questions and foci handle alternatives through the same assignment function predetermines which kinds of accounts we can have of $=?m$. It happens that I do not choose the denotation of $=?m$ that would make use of a uniform assignment function, but I do not want to make this choice in advance, on the basis of a theoretical decision to which I have no strong commitment.

a relationship between alternative sets (as in Rooth, 1992), or in terms of entailment (as in Schwarzschild, 1999), or in terms of both of these (as in Roberts, 2012, using an entailment relationship between alternative sets). For my purposes here, I will express the relationship in terms of alternative sets, formed by existential closure (Heim, 1988; Schwarzschild, 1999) of the utterance’s O- and F-variables.

In order for an operator to make use of an indexed O- or F-variable, it is necessary for the operator to introduce the appropriate index into g . For example, we might propose an operator OP_i that simply takes some argument x and binds it to i , defining it as follows⁸:

$$(295) \quad \text{If } \alpha = [OP_i \beta], \text{ then} \\ \llbracket \alpha \rrbracket^g \stackrel{df}{=} \lambda x \in D_e. \llbracket \beta \rrbracket^{g \cup \{i, x\}}$$

We can also consider the characteristic set corresponding to the function in (295):

$$(296) \quad \{ \llbracket \beta \rrbracket^{g \cup \{i, x\}} \mid x \in D_e \}$$

This set, the **existential closure** of β , can then be used to construct sets like those seen in §1.6.5. For example, the existential closure of “Who laughed?” would be the set of all propositions of the form “ x laughed”.

$$(297) \quad \{ \llbracket \text{who}_1 \text{ laughed} \rrbracket^{g \cup \{1, x\}} \mid x \in D_e \} = \left\{ \begin{array}{l} \lambda w. \text{that Alice laughed in } w \\ \lambda w. \text{that Bernie laughed in } w \\ \lambda w. \text{that Chris laughed in } w \\ \dots \end{array} \right\}$$

Since the notation in (296) can become very unwieldy when considering many indices, I will abbreviate it as double-square “denotation” brackets inside curly “set” brackets: $\{\llbracket \rrbracket_{i_1, i_2, \dots, i_n}^g$, where g is the assignment function and i_1, i_2, \dots, i_n are indices.

$$(298) \quad \text{For any types } \tau_1, \tau_2, \dots, \tau_n, \\ \{\llbracket \alpha \rrbracket_{i_1, i_2, \dots, i_n}^g \stackrel{df}{=} \{ \llbracket \alpha \rrbracket^{g \cup \{i_1, x_1\}, \{i_2, x_2\}, \dots, \{i_n, x_n\}} \mid x_1 \in D_{\tau_1}, x_2 \in D_{\tau_2}, \dots, x_n \in D_{\tau_n} \}$$

⁸Since I am adapting Wold’s (1996) assignment semantics, I adopt his union notation for assignment. However, to be completely accurate, it would be necessary to add an additional condition to each assignment: that the index in question be unassigned in g .

$$(i) \quad \text{If } \alpha = [OP_i \beta], \text{ then} \\ \llbracket \alpha \rrbracket^g \stackrel{df}{=} \begin{cases} \lambda x \in D_e. \llbracket \beta \rrbracket^{g \cup \{i, x\}} & \text{if } i \notin g \\ \text{undefined,} & \text{otherwise} \end{cases}$$

For the purpose of brevity I will leave this additional presupposition unexpressed, because it is identical for every such assignment.

In addition to calling this the “existential closure”; I will also use two more specific terms, corresponding roughly to the *q-alternatives* and *focal alternatives* of Roberts (2012):

- (299) a. When $\llbracket \alpha \rrbracket^g$ binds all otherwise-unbound O indices in α , I will call it the **O-closure** of α .
 b. When $\llbracket \alpha \rrbracket^g$ binds all otherwise-unbound O and F indices in α , I will call it the **F-closure** of α .

Such closures can be trivial; the O-closure of a sentence with no O-variables is just $\llbracket \alpha \rrbracket^g$, and evaluates to the singleton set $\{\llbracket \alpha \rrbracket^g\}$.

5.2.4 Implementing congruence

Once we have O-closures and F-closures, we can express “congruence” relationships in terms of relationships between these closures. For example, we can express the question-answer congruence relationship in §1.6.5 (essentially that of Rooth, 1992) as a subset relationship between the O-closure of the question and the F-closure of the answer.⁹ To calculate whether (300b) is congruent with (300a), we can calculate whether the O-closure of (300a), formed by existentially closing all its unbound O-variables (here, just “who”), is a subset of the F-closure of (300b), formed by existentially closing all its unbound O and F variables (here, just “Alice_F”).

- (300) a. “Who raises chickens?”
 b. “Alice_F raises chickens?”

$$(301) \quad \llbracket \text{who}_1 \text{ raises chickens} \rrbracket_1^g \subseteq \llbracket \text{Alice}_{F_1} \text{ raises chickens} \rrbracket_1^g \\
\{\llbracket \text{who}_1 \text{ raises chickens} \rrbracket^{g \cup \{1,x\}} | x \in D_e\} \subseteq \{\llbracket \text{Alice}_{F_1} \text{ raises chickens} \rrbracket^{g \cup \{1,x\}} | x \in D_e\} \\
\{\lambda w. \text{that } x \text{ raises chickens in } w | x \in D_e\} \subseteq \{\lambda w. \text{that } x \text{ raises chickens in } w | x \in D_e\}$$

Since this relationship holds, (300b) is indeed congruent to (300a).

Meanwhile, because assertions without O-variables just evaluate to the singleton set, we can also express Rooth’s (1992) contrast relationship between two assertions using the same relationship. For example, to calculate whether (302b) is an appropriate contrastive expression following (302a), we can calculate whether the O-closure of (302a), which is trivial because (302a) contains no O-variables, is a subset of the F-closure of (302b).

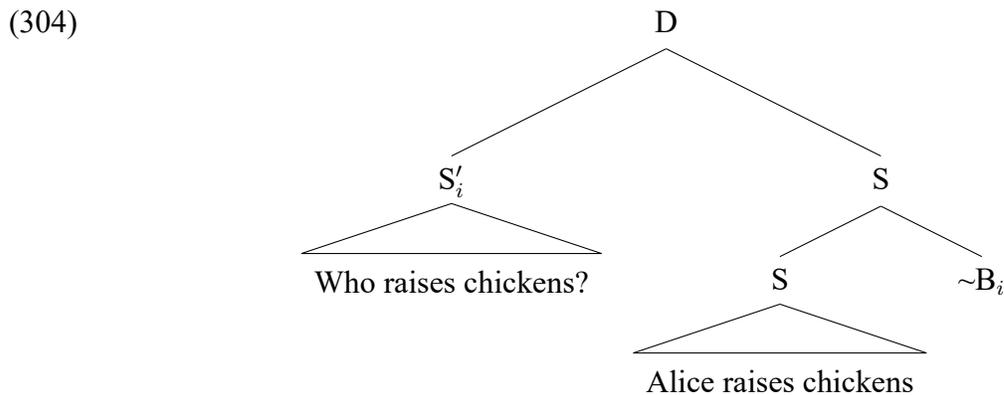
⁹It is also necessary to constrain this relationship so that the F-closure of the answer is not uncooperatively large; I consider how we might do this in §5.3.2.3.

- (302) a. “Bernie raises chickens.”
 b. “No, Alice_F raises chickens.”

- (303) $\llbracket \text{Bernie raises chickens} \rrbracket^g \subseteq \llbracket \text{Alice}_{F_1} \text{ raises chickens} \rrbracket_1^g$
 $\{\llbracket \text{Bernie raises chickens} \rrbracket^g\} \subseteq \{\llbracket \text{Alice}_{F_1} \text{ raises chickens} \rrbracket^{g \cup \{ \langle 1, x \rangle \}} | x \in D_e\}$
 $\{\lambda w. \text{that Bernie raises chickens in } w\} \subseteq \{\lambda w. \text{that } x \text{ raises chickens in } w | x \in D_e\}$

This relationship also holds, so (302b) is likewise “congruent” to (302a).

This relationship suffices for much of the data seen in this investigation, but the question remains of how this relationship is actually calculated. What manages to relate a question and an answer such that this relationship can hold or not hold? Rooth (1992) describes the question/answer relationship in terms of a discourse “syntax” above the level of the sentence, such that questions and answers are in a structural relationship to one another.



This manner of representation, however, leaves some questions unresolved, like what exactly happens when a sentence’s focus expression suggests that it is sensitive to multiple utterances, or what happens when the sentence seems to be sensitive to an unspoken utterance like an implicit question or an implicature. For this reason, I adopt something closer to a “question under discussion” model (Roberts, 2012; Büring, 2003, 2007; Beaver and Clark, 2008) in which utterances update and put constraints on the value of a contextual variable.

5.3 Generalized congruence

“QUD” theories of focus represent discourse as a cooperative game, structured as a potentially complex hierarchy of questions and answers in which the participants use speech acts to update a variety of variables that represent aspects of the common ground (cf. Stalnaker, 1978; Lewis, 1979; Carlson, 1984; van Kuppevelt, 1995; Ginzburg, 1996). One of these variables represents, in a broad sense, the “question under discussion” – often, the current set of alternative propo-

sitions the interlocutors are considering and attempting to narrow down; this question under discussion is sometimes expressed with a spoken question, but is sometimes left implicit.

The equivalent of a “question under discussion” or “current question” variable in this model is C . We might call C the *questions*-under-discussion variable, although it can contain more than questions. Here, C represents that set of considerations – questions, assertions, etc. – that can be observed to have an effect on focus expression; it takes the form of a set of sets of propositions.

We can treat C as a contextual variable much like w ; in the same way that w is an index variable into a set of possible worlds, C is an index variable into a set of “possible conversations”.

Interlocutors do not know which world is w – they entertain a variety of hypotheses about what possible world they might be in, and by putting constraints on the value of w (for example, that the world w we are in is one in which Alice raises chickens), interlocutors suggest to each other what worlds might be viable candidates for w . Meanwhile, interlocutors also do not know exactly what alternatives are relevant to the context – they entertain a variety of hypotheses about what considerations are relevant – and by putting constraints on the value of C (for example, that the conversation C we are having is one in which there is a relevant consideration of the form $\{\lambda w.that\ x\ raises\ chickens\ in\ w\ | \ x \in D_e\}$), interlocutors suggest to each other what conversations might be viable candidates for C . Since “the conversation we are currently having” can change quite rapidly, this variable likewise can change quite rapidly as considerations come into and fall out of relevance.

In this system, congruence and incongruence – that is, the felicity or infelicity of the focus expression in light of previous discourse – is handled not by an independent congruence principle, but are a consequence of the consistency or inconsistency of the claims that speech-act operators make about C .

5.3.1 The contents of C

As noted, C here simply represents the set of alternative sets that can be seen to influence the focus expression of a sentence.¹⁰

I will motivate the contents of C here using English data, but C is not meant to be language

¹⁰I should clarify at the outset that C does not represent an *independent* fact about the discourse – it does not represent the most recent N utterances, or the interlocutors’ knowledge, or alternative sets that are relevant to the discourse according to an independent definition of “relevance”. C just represents those alternative sets – recent or distant, explicit or implicit, complex or singleton – whose relevance to the current discourse we can infer from interlocutors’ focus expressions. The purpose of C in this model is to provide a variable so that different kinds of speech phenomena – focus, questions, disjunctions, indefinites, assertions, etc. – can make claims about the same object.

specific, and different languages may (and I will argue in Chapter 8, do) show that C is richer than we can observe in any one language.

C often contains the “question under discussion” or “current question”; after the utterance of (305a), the contents of C would be those in (306).

(305) *Context: Alice, Bernie, and Chris were at dinner*

- a. “Who ordered chicken?”
- b. “ALICE ordered chicken.”

$$(306) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that \text{ Alice ordered chicken in } w \\ \lambda w.that \text{ Bernie ordered chicken in } w \\ \lambda w.that \text{ Chris ordered chicken in } w \end{array} \right\} \right\}$$

It should be emphasized, however, that the alternative sets included in C need not correspond to the syntactic form sometimes called a “question” or the pragmatic act of “questioning”. For example, we can observe that in English, focus expression in sentences like (305b) can respond to a question, an assertion with a disjunction, or an assertion with an indefinite. The C in (306) could also correspond to the state of the conversation after the utterance of “Alice or Bernie ordered chicken” or “Someone ordered chicken.”

We can also observe that an ordinary assertion can have an effect on focus expression, so C can likewise contain the singleton alternative set corresponding to an assertion (§5.2.3).

- (307) a. “Alice ordered fish.”
- b. “Actually, Alice ordered CHICKEN.”

$$(308) \quad C = \left\{ \left\{ \lambda w.that \text{ Alice ordered fish in } w \right\} \right\}$$

In contrast to a purely question-based congruence model (Roberts, 2012; Beaver and Clark, 2008), it is not necessary in this model to accommodate an unspoken question (along the lines of “What did Alice order?”) here. It may be that interlocutors *do* accommodate such a question, or that such a question is necessary for other aspects of the formal modeling of discourse, but as mentioned in §5.1, the fewer accommodations that we invoke, the better we can argue from congruence patterns to focus locations, in languages where the investigator cannot directly intuit which elements are foci.¹¹

Put another way, this is not a *predictive* account of focus, such that the contents of the previous conversation predict focus expression; rather, it is an *expressive* account of focus, in which focus communicates something about an abstract object.

¹¹Nonetheless, “unspoken” considerations can indeed contribute to C , whether these are implicit questions, presuppositions, or implicatures. The proposition that forms the contrast with (i.b) and (ii.c), $\lambda w.that \text{ Sam owns}$

In all of the dialogues above, the focus expression of the second sentence can be explained by invoking a single set of alternatives, corresponding to a single utterance, but C can also contain multiple alternative sets. For example, superquestion/subquestion sequences like those in (309) would correspond to a complex C like that in (310).

(309) *Context: Alice, Bernie, and Chris were at dinner; chicken and fish were the possible dinner entrees.*

“Who ordered what? What did Alice order? And what did Bernie order?”

$$(310) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that \text{ Alice ordered chicken in } w \\ \lambda w.that \text{ Bernie ordered chicken in } w \\ \lambda w.that \text{ Chris ordered chicken in } w \\ \lambda w.that \text{ Alice ordered fish in } w \\ \lambda w.that \text{ Bernie ordered fish in } w \\ \lambda w.that \text{ Chris ordered fish in } w \end{array} \right\} \left\{ \begin{array}{l} \lambda w.that \text{ Alice ordered chicken in } w \\ \lambda w.that \text{ Alice ordered fish in } w \end{array} \right\} \left\{ \begin{array}{l} \lambda w.that \text{ Bernie ordered chicken in } w \\ \lambda w.that \text{ Bernie ordered fish in } w \end{array} \right\} \right\}$$

C needs to be able to represent multiple alternative sets, rather than just one, because different superquestion/subquestion sequences can have observably different effects on answers (Jackendoff, 1972; Roberts, 2012; Büring, 2003) (§5.5); if C just represented the *union* of all alternatives, then subquestions could never play a role in determining the focus expression of a sentence. There are various ways that we might represent these multiple questions; we could pick out one of the questions as a special variable on its own, or represent them as a stack (Roberts, 2012), or have a single variable containing an object with a more complex structure, *a dog in w*, is only presupposed or implicated, respectively.

- (i) a. “Do you think Sam would think it weird if I bought a toy for her dog?”
b. “Sam has a CAT.”
- (ii) a. “I found a brand-new dog toy in a rental car; what should I do with it?”
b. “Give it to Sam in accounting.”
c. “Sam has a CAT.”

That is to say, this is still an “accommodationist” model, in which interlocutors can treat C as containing alternative sets that have not been expressed with an overt utterance. It is just that this generalized congruence model can in some cases calculate congruence based on overt utterances, where a question-based congruence model needs to invoke accommodation of an implicit question.

representing a hierarchy of questions: something like a Büring (2003) set. For my purposes here, I just allow the variable to be an unstructured set containing one or more questions under discussion, and potential “subquestion” or “superquestion” relationships between them are just a matter of subset relationships between the members.¹²

This potential for multiple alternative sets is also necessary for some instances of complex focus. For example, in §8.7.2, I take a Krifka (1998) and Rullmann (2003) view of additive focus, in which additive answers both answer a question *and* contrast with a particular implicature. This is another situation in which accommodating an implicit QUD – one that subsumes both the overt question and this implicature – would be awkward, because the resulting QUD would be of an unusual form (§8.7.1), whose implicit presence in the discourse would be difficult to establish. It is much more straightforward to simply allow *C* to contain multiple sets of alternatives.

5.3.2 Making claims about *C*

As noted in §5.3, speakers do not know everything about *w*, but they can put constraints on the value of *w* by various means (assertion, presupposition, implicature, etc.) and thus cooperatively narrow down the possibilities. Likewise, speakers do not know everything about *C*, but they can put constraints on the value of *C*; I likewise express these as assertions and presuppositions, and use the same calculus we use to handle assertions and presuppositions about *w*.¹³

This terminology is a source of potential confusion (Dryer, 1996; Roberts, 2012; Büring, 2007) – questions “assert” something of *C*, and are therefore “assertions” in this sense, and meanwhile the term “presupposition” has a number of conflicting meanings within the seman-

¹²Also note that this set does not necessarily contain all the same objects as the full QUD “stack” or hierarchy in Roberts (2012) or Büring (2003) – it does not necessarily contain every superquestion of the immediate question under discussion, all the way back to the universal superquestion “What is the way things are?”. It just corresponds to those questions or assertions in the discourse that can be observed to have effects on the expression of the sentence.

¹³That is, I am taking a basically Stalnaker-style (1973; 1978) view of the relationship between speech acts and worlds, and consider a parallel “possible conversations” semantics for the relationship between speech acts and discourse-relevant alternative sets. The model presented here is “dynamic” in the sense that utterances change the common ground, although the contribution of utterances is not modeled as performing specific updates on the context; utterances simply put constraints on the context and, upon accepting them, interlocutors make whatever adjustments are necessary.

To be precise, however, there is not a substantial *mechanical* difference here between assertion and presupposition in speech acts, since these do not scope under any other operators that would make “false” and “undefined” different values. “Assertion” and “presupposition” here are used here in an admittedly impressionistic sense: that assertions typically add information that is not already in the common ground, whereas presuppositions typically assume that the common ground is already a certain way, such that accommodation is necessary when this assumption fails.

tics of focus – so to disambiguate I will label assertions and presuppositions that place constraints on the value of C as *meta-assertions* and *meta-presuppositions*. I will also, in §5.3.2.3, suggest the possibility of *meta-implicatures*. I choose the label “meta-” to suggest that, unlike normal assertions, presuppositions, and implicatures, they do not address, or arise from, the QUD. Rather, they are assertions, presuppositions, and implicatures *about* the QUD, and address, or arise from, the metaquestion in (311b).

- (311) a. The Big Question: “What is the way things are?” (Roberts, 2012, p. 5)
 b. The Big Metaquestion: “What are we talking about?”

In this system, I will be considering only the contributions of speech acts as far as C is concerned; speech acts, of course, make many additional contributions and this is not meant to suggest that all a speech act does is address the Big Metaquestion.

The generalization of the congruence relationship (§5.2.4, §5.3.1) allows the possibility that we do not need, so far as congruence is concerned, to distinguish the effects of a question on C as different from the effects of an assertion on C , and therefore both the “questioning” and the “asserting” speech acts can be expressed using a single generalized speech act, which I represent as SAY.

SAY binds both O-indices (represented as superscripts on SAY) and F-variables (represented as subscripts on SAY), and makes assertions and presuppositions about the contents of C using the corresponding O-closures and F-closures. C is represented here as a superscript variable on denotations; I will leave other such variables (like w) implicit except when needed.

5.3.2.1 Making assertions about C

I will begin by considering only the meta-assertive contribution of SAY, and consider its meta-presuppositional contribution in §5.3.2.2.

Just as w is updated by assertion, C is updated by meta-assertion. Both questions and assertions make meta-assertions to the effect, roughly, that C contains their ordinary denotations.

- (312) If $\alpha = [\text{SAY}^{i_1, i_2, \dots, i_n} \beta]$, then

$$\llbracket \alpha \rrbracket^{g, C} \stackrel{df}{=} \exists c \in C [c \subseteq \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n}^{g, C}]$$

More specifically, each utterance makes a meta-assertion that some consideration c in C is a subset of the utterance’s O-closure. When the utterance is an ordinary assertion P with no O-variables, its O-closure is trivial, consisting of just the singleton set $\{P\}$.

To illustrate the definition in (312), the question in (313a) makes a meta-assertion that C is (at least) the set in (313b), and the assertion in (314a) makes a meta-assertion that C is (at

least) the set in (314b).

$$\begin{aligned}
(313) \quad \text{a.} \quad & \llbracket \text{SAY}^1(\text{who}_1 \text{ raises chickens}) \rrbracket^{g,C} \\
& = \exists c \in C [c \subseteq \llbracket \text{who}_1 \text{ raises chickens} \rrbracket_1^{g,C}] \\
& = \exists c \in C [c \subseteq \{ \llbracket \text{who}_1 \text{ raises chickens} \rrbracket^{g \cup \{(1,x)\}, C} | x \in D_e \}] \\
& = \exists c \in C [c \subseteq \{ \lambda w. \text{that } x \text{ raises chickens in } w | x \in D_e \}] \\
\text{b.} \quad & C = \left\{ \left\{ \begin{array}{l} \lambda w. \text{that Alice raises chickens in } w \\ \lambda w. \text{that Bernie raises chickens in } w \\ \lambda w. \text{that Chris raises chickens in } w \\ \dots \end{array} \right\} \right\}
\end{aligned}$$

$$\begin{aligned}
(314) \quad \text{a.} \quad & \llbracket \text{SAY}(\text{Alice raises chickens}) \rrbracket^{g,C} \\
& = \exists c \in C [c \subseteq \llbracket \text{Alice raises chickens} \rrbracket^{g,C}] \\
& = \exists c \in C [c \subseteq \{ \llbracket \text{Alice raises chickens} \rrbracket^{g,C} \}] \\
& = \exists c \in C [c \subseteq \{ \lambda w. \text{that Alice raises chickens in } w \}] \\
\text{b.} \quad & C = \left\{ \left\{ \lambda w. \text{that Alice raises chickens in } w \right\} \right\}
\end{aligned}$$

5.3.2.2 Making presuppositions about C

Like Roberts (2012) and Büring (2007), I treat the contribution of focus as, essentially, a kind of presupposition. In those systems, focusing presupposes the existence of an appropriate QUD. Translated into this system, focusing introduces a meta-presupposition regarding the contents of C , to the effect that *every* set in C is a subset of the F-closure. I will illustrate this first for singleton assertions in (315), adding a definedness condition to the previous denotation.

$$(315) \quad \text{If } \alpha = [\text{SAY}_{i_1, \dots, i_n} \beta], \text{ then}$$

$$\llbracket \alpha \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} \exists c \in C [c \subseteq \llbracket \beta \rrbracket^{g,C}], & \text{if } \forall c \in C [c \subseteq \llbracket \beta \rrbracket_{i_1, \dots, i_n}^{g,C}] \\ \text{undefined,} & \text{otherwise} \end{cases}$$

The operator SAY meta-asserts that *some* consideration c in C is a subset of the O-closure, and meta-presupposes that *every* consideration c in C is a subset of the F-closure.

In other words, it meta-presupposes that the infinitary union of C – that is, $\bigcup C$ – is a subset of the F-closure. By making the focus meta-presupposition sensitive to $\bigcup C$ rather than some member of C , we allow that focus expression can be sensitive to more than one consideration – which, of course, is the entire reason we supposed C to consist of multiple considerations in

the first place. I will call $\bigcup C$ the **Overall Question**.

The meta-presupposition of focus can be trivially satisfied (as when it immediately follows an appropriate question, and nothing else is under discussion), or it can fail (as when it immediately follows a question of the entirely wrong shape), but it can also be, and often is, *accommodated* in the sense of Lewis (1979): listeners can decide to update their knowledge of C to fit the speaker’s claim.

The definition in (315) is illustrated for “Alice_F ordered chicken” in (316).

$$\begin{aligned}
 (316) \quad & \llbracket \text{SAY}_1(\text{Alice}_{F_1} \text{ ordered chicken}) \rrbracket \\
 & = \begin{cases} \exists c \in C [c \subseteq \llbracket \text{Alice}_{F_1} \text{ ordered chicken} \rrbracket^{g,C}], \\ \quad \text{if } \forall c \in C [c \subseteq \llbracket \text{Alice}_{F_1} \text{ ordered chicken} \rrbracket_1^{g,C}] \\ \text{undefined, otherwise} \end{cases} \\
 & = \begin{cases} \exists c \in C [c \subseteq \{\llbracket \text{Alice}_{F_1} \text{ ordered chicken} \rrbracket^{g,C}\}], \\ \quad \text{if } \forall c \in C [c \subseteq \{\llbracket \text{Alice}_{F_1} \text{ ordered chicken} \rrbracket^{g \cup \{1,x\},C} | x \in D_e\}] \\ \text{undefined, otherwise} \end{cases} \\
 & = \begin{cases} \exists c \in C [c \subseteq \{\lambda w. \textit{that Alice ordered chicken in } w\}], \\ \quad \text{if } \forall c \in C [c \subseteq \{\lambda w. \textit{that } x \textit{ ordered chicken in } w | x \in D_e\}] \\ \text{undefined, otherwise} \end{cases}
 \end{aligned}$$

Speaking informally, “Alice_F ordered chicken” puts the value of “Alice ordered chicken” into C , but requires that C is, overall, of the form “Who ordered chicken?”.

Questions likewise meta-presuppose that the Overall Question is a subset of their F-closure. Recall from §5.2.3 that calculating the F-closure of a question involves existentially closing *both* its O and F variables. As for why it is necessary to existentially close both kinds of variables, consider the sequence of questions in (317).

(317) “Who ordered what? What did ALICE_F order?”

The first question in (317) asserts that C contains a subset of the question’s O-closure, $\{\lambda w. \textit{that } x \textit{ ordered } y \textit{ in } w | x \in D_e, y \in D_e\}$, resulting in a C something like that in (318).

$$(318) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w. \textit{that Alice ordered chicken in } w \\ \lambda w. \textit{that Bernie ordered chicken in } w \\ \lambda w. \textit{that Alice ordered fish in } w \\ \lambda w. \textit{that Bernie ordered fish in } w \\ \dots \end{array} \right\} \right\}$$

So, if the F-closure of “What did ALICE_F order?” were anything less than $\{\lambda w.that\ x\ ordered\ y\ in\ w\ | \ x \in D_e, y \in D_e\}$, the focus presupposition would fail. This set is what we get if we existentially close *both* the O and F variables (Roberts, 2012, p. 33).

The full definition of SAY is therefore that in (319).

(319) If $\alpha = [SAY_{j_1, j_2, \dots, j_m}^{i_1, i_2, \dots, i_n} \beta]$, then

$$\llbracket \alpha \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} \exists c \in C [c \subseteq \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n}^{g,C}], & \text{if } \forall c \in C [c \subseteq \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n, j_1, j_2, \dots, j_m}^{g,C}] \\ \text{undefined,} & \text{otherwise} \end{cases}$$

To illustrate the full definition in (319), consider the derivation of “What did ALICE_F order?”.

$$(320) \llbracket SAY_2^1(\text{What}_1 \text{ did Alice}_{F_2} \text{ order?}) \rrbracket^{g,C} \\ = \begin{cases} \exists c \in C [c \subseteq \llbracket \text{What}_1 \text{ did Alice}_{F_2} \text{ order?} \rrbracket_1^{g,C}], \\ \quad \text{if } \forall c \in C [c \subseteq \llbracket \text{What}_1 \text{ did Alice}_{F_2} \text{ order?} \rrbracket_{1,2}^{g,C}] \\ \text{undefined, otherwise} \end{cases} \\ = \begin{cases} \exists c \in C [c \subseteq \{\llbracket \text{What}_1 \text{ did Alice}_{F_2} \text{ order?} \rrbracket^{g \cup \{ \langle 1, x \rangle \}, C} | x \in D_e\}], \\ \quad \text{if } \forall c \in C [c \subseteq \{\llbracket \text{What}_1 \text{ did Alice}_{F_2} \text{ order?} \rrbracket^{g \cup \{ \langle 1, x \rangle, \langle 2, y \rangle \}, C} | x \in D_e, y \in D_e\}] \\ \text{undefined, otherwise} \end{cases} \\ = \begin{cases} \exists c \in C [c \subseteq \{\lambda w.that\ Alice\ ordered\ x\ in\ w\ | x \in D_e\}], \\ \quad \text{if } \forall c \in C [c \subseteq \{\lambda w.that\ y\ ordered\ x\ in\ w\ | x \in D_e, y \in D_e\}] \\ \text{undefined, otherwise} \end{cases}$$

Speaking informally, “What did Alice_F order?” puts the value of “What did Alice order?” into C , but requires that $\bigcup C$ is of the form “Who ordered what?”

As in §1.6.5 and §5.2.4, the relationship between the relevant alternative set ($\bigcup C$ here) and the relevant existential closure (here, the F-closure) is one of *subsethood*, rather than identity.¹⁴ So in this model, both the meta-assertion and meta-presupposition express a subset relationship between discourse-relevant alternative sets and their own alternative semantics. They differ in this way:

¹⁴Focus can, and often must, express a larger alternative set than the actual alternatives.

- (i) a. “Alice ordered either the chicken or the fish.”
b. “Alice ordered the CHICKEN.”

- (321) a. Utterances meta-assert that **some** consideration in C is a subset of their **O-closure**.
 b. Utterances meta-presuppose that **every** consideration in C is a subset of their **F-closure**.

How these meta-claims combine to derive the facts of congruence is illustrated in §5.3.3.

5.3.2.3 Making implicatures about C

Since sentences can have more than one O variable and/or more than one F variable, it is also necessary to add a principle that avoids speakers over-focusing and over-“questioning”: focusing more elements than are necessary, or questioning more elements than are necessary. If all that is asserted is that two sets are in a subset relationship, what prevents a speaker from expressing a larger set than necessary? For example, the meta-assertion of (322) is true of the C in (323) – there is indeed a consideration c in C that is a subset of $\{\lambda w.that\ x\ ordered\ y\ in\ w \mid x \in D_e, y \in D_e\}$.

(322) “Who ordered what?”

$$(323) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that\ Alice\ ordered\ chicken\ in\ w \\ \lambda w.that\ Bernie\ ordered\ chicken\ in\ w \end{array} \right\} \right\}$$

If nothing prevented the expression of $\{\lambda w.that\ Alice\ ordered\ chicken\ in\ w, \lambda w.that\ Bernie\ ordered\ chicken\ in\ w\}$ as “Who ordered what?”, then the congruence model above would fail, predicting that (324) could be a congruent discourse.

- (324) a. “Who ordered what?”
 b. #“ALICE ordered chicken.”

The same problem exists for focusing: what prevents the speaker from focusing too much?

- (325) a. “Who stole the diamonds?”
 b. “ALICE stole the DIAMONDS.”

- (326) a. “Bernie stole the diamonds.”
 b. “Actually, ALICE stole the DIAMONDS.”

While the focus on “diamonds” is possible, it suggests a richer discourse than either (325a) and (326a) provide, one in which there is some relevant alternative to diamonds. If the speaker in (325b) and (326b) is *only* intending to reference an Overall Question of the form $\{\lambda w.that\ x\ stole\ the\ diamonds\ in\ w \mid x \in D_e\}$, then they have focused too much.

There are various ways we might restrict this. For example, we could build into the denotation of our speech-act operators that distinguished variables are not trivial, that for each distinguished variable there exists a pair of alternatives that differ with respect to that element. We could posit an explicit principle along the lines of Schwarzschild's (1999) "AVOIDF": "F-mark as little as possible". We could invoke the "Maximize Presupposition" principle (Heim, 1991): since focusing, at least, makes a presupposition, and narrower focus makes a more restrictive claim on *C*, then focusing as little as possible maximizes presupposition.

It may also be possible, however, to prevent over-questioning and over-focusing without an additional principle, by characterizing the behavior of the questioner in (322) as a violation of the cooperative principle (Grice, 1989). That is, we might say that "AVOIDF" is not an independent principle, but just a consequence of "Be cooperative!". After all, if a speaker has in mind a particular set, then it is entirely uncooperative to communicate it by asserting that it is smaller than a much larger set, as the speaker does in (327b) or (328b).

(327) *Context: The answerer does not know exactly how many diamonds Alice stole, but knows that it was around five.*

- a. "How many diamonds did Alice steal?"
- b. "I'm not sure, but it was fewer than fifty."

(328) *Context: The answerer has collected enough evidence to conclude that either Alice or Bernie stole the diamonds, and has concluded that Chris and Dylan are completely innocent.*

- a. "According to your evidence, who stole the diamonds?"
- b. "It was either Alice, Bernie, Chris, or Dylan."

If a similar principle governs the expression of the sets in *C*, then the restriction on over-questioning and over-focusing would be, in a sense, a kind of implicature: a meta-implicature in the sense in §5.3.2. Would this mean that the question maximality principle – the sense that "Who stole what?" must express "Who stole what?", rather than "What did Alice steal?" – is actually an implicature?

There is some reason, I think, to consider that this is an implicature. The resulting principle would be "Propose the most restrictive set that still is a superset of the appropriate considerations." Sometimes this principle is followed, and sometimes it is not, depending on the context. We can illustrate this by considering question "breadth", and consider under what conditions speakers can question a broader constituent than would most narrowly pick out the intended

set.¹⁵

(329) *Context: An upcoming footrace of monarchs has the speaker intrigued.*

- a. “The queen of England and the queen of Sweden are having a footrace. Will the queen of England or the queen of Sweden be fastest?”
- b. “The queen of England and the queen of Sweden are having a footrace. Which queen will be fastest?”
- c. “The queen of England and the queen of Sweden are having a footrace. Who will be fastest?”

(330) *Context: An upcoming footrace of monarchs has the speaker intrigued. It goes without saying that the princess, decades younger and a former Olympic athlete, will defeat the elderly queens, so the speaker is solely interested in comparing the queens.*

- a. “The queen of England, the queen of Sweden, and the princess of Monaco are having a footrace. Will the queen of England or the queen of Sweden be fastest?”
- b. “The queen of England, the queen of Sweden, and the princess of Monaco are having a footrace. Which queen will be fastest?”
- c. “The queen of England, the queen of Sweden, and the princess of Monaco are having a footrace. Who will be fastest?” (\neq “Which queen will be fastest?”)

The question in (329c) can be used to express the same consideration *c* as the questions in (329a-329b) express, but the question in (330c) cannot be used to express the same consideration *c* as the questions in (330a-330b) express. This should be no surprise; the speaker in (330c) has something in mind that they are failing to inform the listener about. What is interesting about this is that it has to do with contextual informativity and speaker goals, rather than a mere comparison of set size or constituents indexed. The speaker in (329c) can get away with a less-effort question because it is adequately informative, in this context, about the speaker’s goal; the speaker in (330c) cannot get away with the less-effort question, since it is inadequately informative about the speaker’s goal.

Can this implicature be cancelled? Possibly; there are times when we can follow up a broader question with a more narrow utterance that better specifies the intended set, as in (331).

¹⁵This is easiest to illustrate with questions, because the breadth of a WH variable is unambiguous. This is difficult to illustrate using focus breadth, because the relationship between focus indexation and focus marking is more indirect. We could illustrate, using clefts, that focus *marking* has this same property, but this does not necessarily constitute an argument that focus indexation has this property.

(331) “The queen of England, the queen of Sweden, and the princess of Monaco are having a footrace. Who will be fastest? I mean, among the queens.”

The question “Who will be the fastest?” would probably be interpreted as specifying an answer set (all the runners) that is too large for the speaker’s intended *c* (the queens), but the speaker can also make a move to narrow that set. This is, essentially, a cancellation: the speaker is contradicting a conclusion that the listener might have made.

Then again, we might hesitate to expand this explanation to multiple-WH questions. Do we allow that “Who stole what?” could be used to express the selfsame set of “Who stole the diamonds?”, such that the second question in (332) is *cancelling* the maximality implicature of the first?

(332) “Who stole what? Who stole the diamonds?”

The second question in (332) does not strike me, intuitively, as a cancellation of the first. But what would be the difference, then, between the example in (331) and the example in (332), such that the former can be “cancelled” but the latter cannot?

The “cancellable” example in (331) is an example of, in some sense, a “less effort” question, where the speaker had the option of choosing more complicated means of narrowing the set, but eschewed them. On the other hand, expressing $\{\lambda w.that\ x\ stole\ the\ diamonds\ in\ w\ | x \in D_e\}$ as “Who stole what?” is not in the service of informativity, and probably not in the service of least-effort; it is simply uncooperative.

I mention this because “cancellability” or “suspendability” is often taken as diagnostic for implicatures, but cancellation is limited by discourse goals. Utterances have to be in *some* way cooperative in order for cancellation to rescue them. Consider how shifting the question under discussion effects cancellability. We can observe that “I have two children” implicates (by Quantity) “I don’t have three children”, and, when someone is looking to buy cigarettes, that “There is a gas station two blocks that way” implicates (by Relevance) “You can buy cigarettes there”, but the ability to *suspend* these implicatures depends on the questions under discussion.

(333) a. “Do you have two children?”
b. “I have two children. In fact, I have three.”

(334) a. “Do you have three children?”
b. ??“I have two children. In fact, I have three.”

(335) a. “I need to buy some cigarettes. Is there a gas station around here?”
b. “There’s a gas station two blocks that way... but you can’t buy cigarettes there.”

- (336) a. “Where can I buy some cigarettes?”
 b. ??“There’s a gas station two blocks that way... but you can’t buy cigarettes there.”

While the answerer is cooperatively answering the overt question, as in (333) and (335), they might nonetheless fail to satisfy a cooperative maxim like Quantity or Relevance; “cancellation” is, in a sense, a repair, where the speaker makes clear that their original answer was only partially cooperative by offering more cooperative information. This is not a universal license to be uncooperative; the uncooperative answers in (334b) and (336b) are not rescued by “cancellation”.

Put another way, utterances presented in isolation may *appear* to suggest that implicatures can always be cancelled, because we as readers can always accommodate that the QUD was such that the utterance was a cooperative answer. Considered in context, however, the implicatures of an utterance cannot always be disavowed.

This is relevant to potential meta-implicatures like the ones discussed above, because meta-implicatures do not arise from any ordinary QUD. They are implicatures *about* the QUD, arising from the Big Metaquestion “What are we talking about?”. We may not be able to “shift” this question in such a way that it rescues uncooperative questioning and focusing behavior; while we can assume of claims that they answer a variety of possible QUDs, is there another question that a meta-claim could address?

In any case, regardless of the origin of the “AVOIDF” principle – whether it is an independent principle or arises as a consequence of the cooperative principle – we can nonetheless put it forward as a constraint on question and focus expression and interpretation:

- (337) AVOIDF: Index as little as possible with O and F indices, without making the speech act contribution false or undefined.

The definitions in §5.3.2.1 and §5.3.2.2 ensure that speakers use *enough* O and F variables; AVOIDF ensures that speakers do not use *too many* O and F variables. Between these, they ensure that speakers use *just enough* variables to specify the set they intend; I will illustrate how in the section that follows.

5.3.3 Congruence illustrated

5.3.3.1 Question-assertion congruence

To illustrate how the model in §5.3 derives congruence and incongruence from consistency and contradiction, consider the short dialogue in (338). Assume for the moment that the discourse is empty, and neither speaker knows yet what the other person considers *C* to be.

- (338) a. SAY¹(Who₁ raises chickens?)
 b. SAY₁(Alice_{F₁} raises chickens.)

In (338a), the speaker has in mind a particular set of alternatives – say, $\{\lambda w.that\ Alice\ raises\ chickens\ in\ w, \lambda w.that\ Bernie\ raises\ chickens\ in\ w, \lambda w.that\ Chris\ raises\ chickens\ in\ w\}$ – to which they want a resolution. In putting forward the question in (338a), the speaker is giving the listener a “clue” regarding its identity, by meta-asserting that a subset of $\{\lambda w.that\ x\ raises\ chickens\ in\ w \mid x \in D_e\}$ is in C . The listener does not necessarily know what exact alternatives the questioner considers part of C , but they know more about C than they did before.

In response, the answerer in (338b) provides an answer (that Alice raises chickens) and meanwhile meta-presupposes that every set in C is a subset of $\{\lambda w.that\ x\ raises\ chickens\ in\ w \mid x \in D_e\}$. This meta-presupposition succeeds, rendering this dialogue congruent.¹⁶

Now consider the non-congruent dialogue in (339).

- (339) a. SAY¹(Who₁ raises chickens?)
 b. SAY₁(Alice raises chickens_{F₁}.)

In (339a), the speaker is doing the same thing as the speaker of (338a) did, asserting that a subset of $\{\lambda w.that\ x\ raises\ chickens\ in\ w \mid x \in D_e\}$ is in C . However, the speaker in (339b), although making the same meta-assertion, $\lambda w.that\ Alice\ raises\ chickens\ in\ w$, meta-presupposes that every consideration in c is a subset of $\{\lambda w.that\ Alice\ raises\ x\ in\ w \mid x \in D_e\}$.

There is only one possible C such that both the meta-assertion in (339a) and the meta-presupposition in (339b) succeed: the trivial C in (340).

$$(340) \quad C = \left\{ \left\{ \lambda w.that\ Alice\ raises\ chickens\ in\ w \right\} \right\}$$

The speakers cannot be assuming that this is the value of C , however, since adding $\lambda w.that\ Alice\ raises\ chickens\ in\ w$ to C by asking “Who raises chickens?” would have been an egregiously uncooperative violation of AVOIDF.

Therefore, there are no possible values of C such that both the meta-assertion in (339a) and the meta-presupposition in (339b) succeed, rendering this dialogue incongruent.

¹⁶Note that it does not matter, given the definitions in §5.3.2.1 and §5.3.2.2, whether the meta-presupposition comes “before” or “after” the meta-assertion. Since the meta-asserted existential closure (the “OSV”) is, by the mechanics of the system, invariably a subset of the meta-presupposed existential closure (the “FSV”), there are no situations in which the addition of the OSV to C can cause the meta-presupposition to fail.

5.3.3.2 Assertion-assertion congruence

We can also consider congruence between two assertions, such as the contrasting assertions in (341). Again, assume an empty discourse, and treat the original assertion as athetic sentence.¹⁷

- (341) a. SAY(Alice raises ducks.)
b. SAY₁(Alice raises chickens_{F₁}.)

In (341a), the speaker meta-asserts that C contains $\{\lambda w.that Alice raises ducks in w\}$. In (341b), the speaker meta-asserts that C contains $\lambda w.that Alice raises ducks in w$, but also meta-presupposes that every c in C is a subset of $\{\lambda w.that Alice raises x in w \mid x \in D_e\}$. This succeeds, and thus this dialogue is congruent.¹⁸

Now let us consider an example of a contrast that is not congruent, in (342).

- (342) a. SAY(Alice raises ducks.)
b. SAY₁(Alice_{F₁} raises chickens.)

Again, the speaker in (342a) has meta-asserted that C contains $\{\lambda w.that Alice raises ducks in w\}$. In (342b), however, the second speaker is meta-presupposing that every c in C is a subset of $\{\lambda w.that x raises chickens in w \mid x \in D_e\}$; this meta-presupposition fails and as a result the dialogue is incongruent.

5.3.3.3 More complex congruence

Here we consider the effect of more complicated dialogues: those in which an utterance is potentially congruent with more than one question, or with a question and an assertion.

Consider first a dialogue like that in (343).

- (343) a. “Who ordered what? What did ALICE order?”
b. “ALICE ordered CHICKEN.”

These do not, of course, have the same accent – “Alice” in (343b) is a contrastive topic – but I will leave that aside for now to consider just their contribution as foci. To begin, we can consider the congruence of the questions in (344a) and (344b).

¹⁷Whether this means that nothing is F-indexed, or the entire sentence is F-indexed, I am unsure. A no-F sentence would meta-presuppose an entirely empty C , whereas an all-F sentence would make no presupposition about C at all: it would be compatible with any value of C . AVOIDF would suggest preferring the former. In the end our choice depends on what we want thetic sentences to do: “wipe the slate clean”, or respond to the implicit Big Question “What is the way things are?”

¹⁸This will succeed even if we evaluate the meta-presupposition before the meta-assertion, when C still only contains $\lambda w.that Alice raises ducks in w$. Although $\{\lambda w.that Alice raises x in w \mid x \in D_e\}$ is not the narrowest set that contains $\lambda w.that Alice raises ducks in w$, it does not violate our AVOIDF: this is still the minimal F-marking that produces an existential closure of “Alice raises chickens” that will contain $\lambda w.that Alice raises ducks in w$.

- (344) a. SAY^{1,2}(Who₁ ordered what₂?)
 b. SAY₂¹(What₁ did Alice_{F₂} order?)
 c. SAY_{1,2}(Alice_{F₁} ordered chicken_{F₂}.)

The question in (344a) meta-asserts that C contains a question of the form $\{\lambda w.that\ x\ ordered\ y\ in\ w\ | \ x \in D_e, y \in D_e\}$, resulting in a C something like that in (345).

$$(345) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that\ Alice\ ordered\ chicken\ in\ w \\ \lambda w.that\ Bernie\ ordered\ chicken\ in\ w \end{array} \right\} \right\}$$

The question in (344b) meta-presupposes that every consideration c in C is a subset of $\{\lambda w.that\ x\ ordered\ y\ in\ w\ | \ x \in D_e, y \in D_e\}$. This succeeds, so (344a) is congruent with (344b). Meanwhile, the question in (344b) also meta-asserts that there exists a c in C that is a subset of $\{\lambda w.that\ Alice\ ordered\ x\ in\ w\ | \ x \in D_e\}$. This is not already satisfied by the C in (345), so another set is added to C , resulting in the C in (346).

$$(346) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that\ Alice\ ordered\ chicken\ in\ w \\ \lambda w.that\ Bernie\ ordered\ chicken\ in\ w \end{array} \right\} \right\} \left\{ \begin{array}{l} \lambda w.that\ Alice\ ordered\ fish\ in\ w \\ \lambda w.that\ Bernie\ ordered\ fish\ in\ w \end{array} \right\}$$

Finally, the assertion in (344c), in addition to meta-asserting that some consideration in C is a subset of $\{\lambda w.that\ Alice\ ordered\ chicken\ in\ w\}$, meta-presupposes that every consideration c in C is a subset of $\{\lambda w.that\ x\ ordered\ y\ in\ w\ | \ x \in D_e, y \in D_e\}$. Again this succeeds, so (344c) is congruent with the previous discourse.

Things become somewhat more interesting when we consider what happens if Alice is not focused; the answer in (347a) still strikes me as a possible response to the questions in (347a).

- (347) a. “Who ordered what? What did ALICE order?”
 b. “Alice ordered CHICKEN.”

The assertion in (347b) is meta-presupposing that every c in C is of the form $\{\lambda w.that\ Alice\ ordered\ x\ in\ w\ | \ x \in D_e\}$. This is not the case in (346), but the listener can accommodate this if they *remove* the “old question” from C . (If removal were not a possible accommodation, old questions might continue to have effects on the discourse in perpetuity; eventually, focus meta-presuppositions have to stop referring to old questions.)

This may seem circular, but recall that the contents of C are not facts independent of focus expression; taken as an independent *predictor* of focus this would indeed be circular, but the goal here is just to model what speakers express when they use focus. C does not necessarily represent the most recent utterance, or the last two utterances, or the last N utterances; it just represents some set of considerations that the speaker considers relevant, which might or might not correspond to the previous N utterances.

In ordinary question/answer discourse, C will usually represent *at least* the most recent overt utterance; we can see in (339) and (342) presuppositions that fail, whereas they could have succeeded if the speakers were willing to empty out C . However, emptying out C would have required that the listener accommodate that the speaker does not consider the immediately prior question, with which the answer shares most of its words, to be relevant; this is a more extreme accommodation than retiring an older question from C and addressing only the newer one.

5.4 Yes/no questions and answers

The variable definitions in §5.2.2.1 and §5.2.2.2 are not type-specific – while each variable has a type, of course, being an O-variable or being an F-variable can presumably apply to any type of variable, whether it range over entities, predicates, etc. An issue remains, however, regarding whether yes/no questions like (348a), and focus in response to yes/no questions (348b) (what is often termed *verum* focus after Höhle, 1988), require special treatment.

- (348) a. “Did Alice order chicken?”
 b. “Alice DID order chicken.”

There is not a solid consensus, in the focus literature, regarding what yes/no questions denote, and therefore what the focus semantic value of a yes/no answer is. Many authors follow Hamblin (1958, 1973) in having polar questions denote a two-member alternative set (349a), but meanwhile some “question under discussion” models that represent discourse as hierarchy of questions (Roberts, 2012; Büring, 2003) utilize a singleton alternative set for this (349b).

- (349) a. $\left\{ \begin{array}{l} \lambda w.that\ Alice\ ordered\ chicken\ in\ w \\ \lambda w.that\ Alice\ did\ not\ order\ chicken\ in\ w \end{array} \right\}$
 b. $\left\{ \lambda w.that\ Alice\ ordered\ chicken\ in\ w \right\}$

In the model I adopt here, I follow Krifka (2013) in saying that yes/no questions can denote *either* $\{P, \neg P\}$ or $\{P\}$ alternative sets – in Krifka’s terms, these are **bipolar** and **monopolar**,

respectively – in particular because it appears that Kwak’wala morphologically differentiates the two (§8.4, §8.6.2).

To generate monopolar questions, no additional mechanism is needed; simply having no O-variables would lead to a singleton $\{P\}$ alternative set (cf. Roberts, 2012, p. 10).¹⁹ To generate bipolar yes/no questions, however, some manner of bipolar O-variable would be needed, and to generate bipolar focus semantic values, some manner of bipolar F-variable would be needed.

These variables may require some special consideration, in order that they range over the appropriate values. For example, it would be reasonable to assume that the “focused” affirmative and negative operators are the same type as the affirmative and negative operators, something like $\langle st, st \rangle$. There are an infinite number of $\langle st, st \rangle$ functions, but the O- and F-variables corresponding to them should only range over the functions in $\{\lambda p.p, \lambda p.\neg p\}$ (or whatever we implement affirmation and negation as). This corresponds to the intuition that both the question in (348a) and the focused assertion in (348b) invoke only the alternatives in (349a), rather than any set of alternatives that arbitrary proposition-to-proposition functions could generate from $\lambda w.\textit{that Alice ordered chicken in } w$. Perhaps such alternative sets could contain other functions, like the confidence functions that Romero and Han (2004) include in their *verum* semantics, but in any case this set needs to be constrained to some reasonable subset of the appropriately-typed functions, not just any appropriately-typed functions.

The bipolar alternative generator is therefore something like a disjunction in §5.2.2.1, a variable that only ranges over a particular specified subset of values. The bipolar O-variable – the equivalent of a WH element in bipolar questions – would therefore be something like that in (350); I will call it YN and assume a high syntactic attachment.²⁰

$$(350) \quad \llbracket \text{YN}_i \rrbracket^g \stackrel{df}{=} \begin{cases} g(i), & \text{if } i \in \text{Dom}(g) \wedge g(i) \in \{\lambda p.p, \lambda p.\neg p\} \\ \text{undefined}, & \text{otherwise} \end{cases}$$

A sentence with YN is not itself semantically bipolar; it simply has a variable in it. It is the O-closure of the sentence, as calculated when SAY^i binds YN_i , that is bipolar; the O-closure of (351b) would be the set in (351b).

¹⁹Note that this means that, for the purposes of the generalized congruence calculation, plain assertions (i.e., those that do not contain an O-variable) and monopolar questions are treated as having the same semantics.

This semantic equivalence of assertions and monopolar questions is in part an artifact of this particular system, in which other differences between assertions and questions are not modeled. In a more complete system like that in Krifka (2015), which *does* model these differences, assertions, monopolar questions, and bipolar questions each have a distinct semantics.

²⁰I should note, however, that this YN is not necessarily the same thing as what causes auxiliary inversion in English yes/no questions; some inverted questions have a bipolar semantics and others (e.g., fixed-choice alternative questions like “Did Alice order chicken or fish?”) do not. It may be that YN is such that its presence causes auxiliary inversion, but it cannot be the only syntactic element that does so.

(351) a. “Did Alice order the chicken?” (= SAY¹ [YN₁ [Alice -d order the chicken]])

$$\begin{aligned}
 & \text{b. } \llbracket \text{YN}_1(\text{Alice ordered the chicken}) \rrbracket_1^{g,C} \\
 & = \left\{ \begin{array}{l} \lambda w. \text{that Alice ordered the chicken in } w \\ \lambda w. \text{that Alice did not order the chicken in } w \end{array} \right\}
 \end{aligned}$$

SAY meta-asserts that there is a consideration of that form in C , thereby “adding” a bipolar question to the context.

Like any other O-variable, YN _{i} has no default value; if the calculation has not provided a value for i in g then YN _{i} is undefined. Therefore, we cannot just use the same function YN to handle bipolar focus; we need a function whose ordinary semantic value (that is, whose default semantic value) is defined. The natural candidate for this is the functional head sometimes called AFF _{F} (e.g. in Krifka, 1998), the “focused” affirmative particle. I implement AFF _{F} as the particle whose ordinary semantic value is that of its complement, but whose focus semantic value is the corresponding bipolar alternative set.

$$(352) \quad \llbracket \text{AFF}_{F_i} \rrbracket_{df}^g = \begin{cases} g(i), & \text{if } i \in \text{Dom}(g) \wedge g(i) \in \{\lambda p.p, \lambda p.\neg p\} \\ \lambda p.p, & \text{otherwise} \end{cases}$$

Put another way, just as “Alice _{F_1} ” is implemented as if it were a “who₁” with a default value of *Alice* in (5.2.2.2), AFF _{F_1} is implemented as if it were a YN₁ with a default value of AFF.

When AFF _{F_i} is bound by SAY _{i} , the resulting O-closure (353b) is monopolar – it is just the set containing the asserted proposition – but the F-closure (353c) is bipolar, and is identical to the O-closure of the corresponding question in (351).

(353) a. “Alice DID order the chicken.” (= SAY₁ [AFF _{F_1} [Alice -d order the chicken]])

$$\begin{aligned}
 & \text{b. } \llbracket \text{AFF}_{F_1}(\text{Alice ordered the chicken}) \rrbracket^{g,C} \\
 & = \left\{ \lambda w. \text{that Alice ordered the chicken in } w \right\} \\
 & \text{c. } \llbracket \text{AFF}_{F_1}(\text{Alice ordered the chicken}) \rrbracket_1^{g,C} \\
 & = \left\{ \begin{array}{l} \lambda w. \text{that Alice ordered the chicken in } w \\ \lambda w. \text{that Alice did not order the chicken in } w \end{array} \right\}
 \end{aligned}$$

SAY meta-asserts that a consideration of the form (353b) is in C , but meta-presupposes that all considerations in C are of the form (353c). When the question was “Did Alice order the chicken?”, this presupposition succeeds; if the only relevant consideration in the context had been “What did Alice order?”, this presupposition would have failed.

AFF _{F} is the mechanism by which sentences can be congruent with a prior bipolar ques-

tion. So long as we allow yes/no questions to have a Hamblin-style semantics of $\{P, \neg P\}$ and implement congruence in terms of subsethood, we need some function that will create focus semantic values of this form; in this model it is AFF_F that creates these.

5.5 Contrastive topic

I will not, in this investigation, distinguish between *focus* and *contrastive topic* (Szabolcsi, 1981; Gundel, 1989; Büring, 2003); since both are (informally) minimal variations between alternatives and (formally) F-variables, I will treat both as foci. However, I will note briefly that the system above could be expanded to allow a Roberts- (2012) or Büring-style (2003) analysis of Jackendoff’s (1972) famous examples.

- (354) a. “Well what about FRED? What did HE eat?”
 b. “FRED_B ate the BEANS_A.”

- (355) a. “Well, what about the BEANS? Who ate THEM?”
 b. “FRED_A ate the BEANS_B.”

We can observe that, in the sentences in (354-355), the accented elements receive two different accents, what Jackendoff (1972) called the **A-accent** and **B-accent**, corresponding respectively to the L-L% and L-H% contours in Pierrehumbert and Hirschberg (1990). In Roberts (2012) and Büring (2003), (354b) and (355b) both answer a superquestion-subquestion sequence, and have different intonations because they answer different sequences: while both answer “Who ate what?”, they answer different subquestions of it:

- (356) a. “Who ate what? What did FRED eat?”
 b. “FRED_B ate the BEANS_A.”

- (357) a. “Who ate what? Who ate the BEANS?”
 b. “FRED_A ate the BEANS_B.”

If we look at the predicted values of C for these question sequences – for example, the C in (358) for (356a) – we can notice a pattern, that while the “true” focus (“beans”) is variable with respect to every question in C , the contrastive topic (“Fred”) is variable with respect to one question and fixed with respect to the other question.

$$(358) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that \text{ Fred ate the beans in } w \\ \lambda w.that \text{ Bob ate the beans in } w \\ \lambda w.that \text{ Fred ate the salad in } w \\ \lambda w.that \text{ Bob ate the salad in } w \end{array} \right\} \right\}$$

So long as ‘true’ foci can be distinguished from contrastive topics (§5.2.2.3) by some means, then we can express this pattern within the meta-presupposition of SAY: roughly, that SAY(Fred_{CT} ate the beans_F) has an additional presupposition regarding the existence of a consideration of the form $\{\lambda w.that \text{ Fred ate the } x \text{ in } w \mid x \in D_{et}\}$.

I will call contrastive topics **T-variables** here, but it is not necessary in this model to give T-variables a special semantics. They are just F-variables in the sense of §5.2.2.2, phrases that sometimes need to be interpreted with their normal value and sometimes need to be interpreted with a variable value. All that is necessary is that SAY can distinguish them (cf. §5.2.2.3); I will treat T-indices as prescripts of SAY. The denotation of this SAY is given below; for clarity I will only illustrate it with one of each index type.

(359) If $\alpha = [{}_k \text{SAY}_j^i \beta]$, then

$$[[\alpha]]^{g,C} \stackrel{df}{=} \begin{cases} \exists c \in C[c \subseteq \llbracket \beta \rrbracket_i^{g,C}], & \text{if } \exists c \in C[c \subseteq \llbracket \beta \rrbracket_{i,j}^{g,C}] \\ & \wedge \forall c \in C[c \subseteq \llbracket \beta \rrbracket_{i,j,k}^{g,C}] \\ \text{undefined,} & \text{otherwise} \end{cases}$$

In other words:

- (360) a. Utterances meta-**assert** that **some** consideration in C is a subset of the existential closure of the **O**-variables.
 b. Utterances meta-**presuppose** that **some** consideration in C is a subset of the existential closure of the **O**- and **F**-variables.
 c. Utterances meta-**presuppose** that **every** consideration in C is a subset of the existential closure of the **O**-, **F**-, and **T**-variables.

So for a sentence like (361a), the sentence makes the same meta-assertions and meta-presuppositions it would in the previous model, but also meta-presupposes that some consideration is a subset of $\{\lambda w.that \text{ Fred ate the } x \text{ in } w \mid x \in D_{et}\}$. Meanwhile, a sentence like (361b) would meta-presuppose that some consideration is a subset of $\{\lambda w.that \text{ } x \text{ ate the beans in } w \mid x \in D_e\}$.

- (361) a. ${}_1\text{SAY}_2(\text{Fred}_{T_1} \text{ ate the beans}_{F_2})$
 b. ${}_2\text{SAY}_1(\text{Fred}_{F_1} \text{ ate the beans}_{T_2})$

This allows us to capture the congruences seen in (356-357), ensuring that (356b) answers (356a) but not (357a), and that (357b) answers (357a) but not (356a).

I will, however, not be considering T-variables in Kwak’wala, since I have not yet found Kwak’wala data that would require distinguishing contrastive topics from foci. I am also not necessarily suggesting that this is the correct or best way to handle contrastive topics. Primarily, I introduce this extension of the model to illustrate that, despite the more complex congruence facts seen in (356-357), we do not necessarily need a more complex semantics of foci within the sentence itself to achieve a Büring-style (2003) account of it.

This becomes useful in the presentation of “complex bipolar” alternative sets in §8.7, allowing us to examine certain multiple-focus sentences without necessarily designating which (if any) of the foci are topics (§8.7.1.4). This also fits within the general theme of this model: insofar as possible, to treat foci as “different uses of focusing, but not different foci” (Büring, 2007, p. 80). Here, foci and contrastive topics are just phrases with “semivariable” interpretation, but differ in the uses to which a higher operator (SAY) puts them.

5.6 Association with focus

In Chapters 7 and 8, I examine a variety of Kwak’wala “focus operators”: those operators, like “only”, “also”, “still”, and “always”, that utilize focus semantic values in the calculation of their truth- and use-conditions.²¹

- (362) a. “I only convinced the LINGUISTS in Vancouver.”
 b. “I only convinced the linguists in VANCOUVER.”

- (363) a. “I also convinced the LINGUISTS in Vancouver.”
 b. “I also convinced the linguists in VANCOUVER.”

²¹In English, these are often termed “focus-sensitive operators”, in the sense that differences in the expression of focus correspond to differences in interpretation like those in (362-363). In Kwak’wala, on the other hand, it is less often the case that focus expression narrows down the location as narrowly as English focus expression does, such that we could regularly observe the kind of correspondences in Kwak’wala that define a class of “focus-sensitive” elements in English.

This is another case of the concern seen in §1.7: that presupposing that a correspondence exists can make it difficult to pin down a class of phenomena in an unfamiliar language, when that correspondence might be partial or missing. For this reason, I am again choosing to concentrate on a semantic phenomenon – “focus operators” here are just those overt operators whose evaluation would rely upon the “semivariable” nature of foci elsewhere in the sentence, whether or not the position of those foci can be independently established or independently manipulated.

Sentences like those in (362-363) have different conditions on their use. In order to calculate when it is felicitous or infelicitous to express the sentences in (362-363), the calculation must therefore have some manner of access to both *the linguists in Vancouver* and variable interpretations (*the [someone] in Vancouver* and *the linguists in [somewhere]*, respectively). The focus that the focus operator makes use of in its semantic evaluation is generally called the **associate** of the operator.

The question of “association with focus” is one of long-standing interest within formal semantics (e.g. Jacobs, 1983; Rooth, 1985; Krifka, 2006; Beaver and Clark, 2008). What information does a focus operator like “only” or “also” have access to, such that the correct truth- and use-conditions of the sentence can be calculated?

5.6.1 A problem of binding

In §5.2.2.2, I presented overt operators like “only” as if they bind the F-variables with which they appear to associate.

(364) I only₁ convinced the linguists_{F₁} in Vancouver.

However, a problem arises within this model when we try to account for both focus operators and discourse congruence: the overt operator and the SAY operator would *both* need to bind the focus variable. The SAY operator needs the “variable” interpretation of “linguists” to predict the correct congruence facts, but the exclusive or additive operator likewise needs this variable interpretation for its own calculation.

(365) SAY₁(I only₁ convinced the linguists_{F₁} in Vancouver)

Most theories of focus (with the notable exception of Roberts, 2012) do not allow higher calculations outside the scope of a focus operator to access the associated focus of the lower operator. In a variable-binding model, this unavailability of a focus outside of its associated operator is just a consequence of a more general principle (Wold, 1996): the requirement that quantifiers introduce novel indices (Heim, 1988).

But how, then, are sentences containing focus operators congruent with the broader discourse at all? Whether we encapsulate congruence as an “operator” or not, the congruence calculation for the sentences in (362-363) must have access to more than just the invariable meaning *I convinced the linguists in Vancouver* or else it would calculate that a sentence like that in (364) would be congruent only to contexts in which there were *not* relevant alternatives to “linguists”, which is the entirely wrong result.²²

²²We might, then, consider that perhaps SAY does not bind these variables at all, and that the congruence

One way out of this problem – and the one that I will adopt – is to posit that the congruence calculation and the overt operator have access to the focus via different mechanisms. There are additional reasons to posit this, as well, dealing with some seemingly-paradoxical behavior of focus association with respect to syntactic islands.

5.6.2 A problem of movement

The relationship between an operator and its associate is often a long-distance dependency – the evaluation of the sentence requires that the operator have access to information about an element with which it is not, on the surface, local – and therefore an early debate concerned whether or not this dependency was mediated by syntactic movement (Fischer, 1968; Jackendoff, 1972; Anderson, 1972; Chomsky, 1976). Do foci move to become arguments of their operators?²³

The difficulty with a movement account of focus association is that some putative associates, like “cats” in (366), would be stuck inside syntactic islands (Anderson, 1972; Jackendoff, 1972; Rooth, 1985).

(366) I’m sorry, Mary only dates firemen who love CATS_F.

This is not a position that, ordinarily, we would expect movement from:

(367) *What does Mary date firemen who love?

I should emphasize the question at hand here is not whether a particular theory of movement, or semantic implementation of movement, should be used for the resolution of long-distance focus dependencies in English or Kwak’wala. The question is this: does the relationship between the operator and the focus obey, or disobey, the constraints that we can observe on other long-distance dependencies in the language? (cf. Krifka, 2006, p. 107)

We can observe, in both English and Kwak’wala, long-distance meaning dependencies between an operator and its apparent associate that *do not* obey restrictions that we otherwise observe for movement. Therefore either:

- Possibility 1: association is not achieved by movement after all, or
- Possibility 2: the accented element is not really the associate.

presuppositions are handled by the overt operators. However, overt operators would not always have enough information to calculate the correct congruence presupposition for the sentence as a whole, such as in cases where there are additional foci outside of the scope of the overt operator. Even if SAY did bind those additional foci, SAY and the overt operator would each make different and incompatible presuppositions.

²³Early movement theories of focus, such as Fischer (1968), posited the overt movement of the operator from its associate to its surface position, rather than the covert movement of the associate from its surface position to its operator, but some of the same counterarguments apply to both.

Many theories (e.g. Rooth, 1985; Kratzer, 1991; Rooth, 1992) avoid the island problem by using the first of these possibilities, proposing mechanisms in which foci remain *in situ*, but alternative denotations can be composed alongside regular denotations, giving operators access to the appropriate alternatives without the need for mediation by movement. The binding mechanism proposed in this chapter is an *in-situ* mechanism.

However, at least some aspects of association *do* seem to be sensitive to syntax, including syntactic islands, in ways that are awkward for theories of association designed to *avoid* the influence of syntax on focus interpretation (Drubig, 1994; Beaver and Clark, 2003; Wagner, 2006; Krifka, 2006; Rochemont, 2012b). Various phenomena in English argue for the existence of a syntactic phrase – called the **focus phrase** – potentially larger than the focus itself and standing in a movement-like relationship to an operator.

It is important to keep this conceptually separate from the idea of “focus projection” (Gussenhoven, 1983; Selkirk, 1984; Rochemont, 1986). There are three notions of focus that are important to distinguish here:

- a. The location of prosodic focus marking.
- b. The focus in a semantic sense: the element that varies between alternatives.
- c. The syntactic constituent that acts as an argument to a “focus-sensitive” operator.

The “focus projection” literature deals with the relationship between (a) and (b); the “focus phrase” literature deals with the relationship between (b) and (c).²⁴

For example, in (366), the argument to “only” would not be “cats”, but rather the entire DP island that surrounds it, “firemen who like cats”.²⁵

(368) I’m sorry, Mary only dates [firemen who love CATS_F]_{FP}.

We can observe the existence of this constituent in English by various means. For example, “only” licenses negative polarity items (NPIs) only outside of the focus phrase (Wagner, 2006), and the “but *X*” corrective construction can act as an overt marker of scope regarding the association of negation (Drubig, 1994; Krifka, 2006).

²⁴It is also important to keep this notion of “focus phrase” conceptually separate from the notion of “FP” or “FocP” used in, for example, Brody (1990) or Rizzi (1997). “FP” in that sense means “the XP projected from a functional head F”, the landing spot for overt focus movement in languages like Hungarian. The “FP” in the sense intended here just describes some phrase, often a DP, that serves as an argument to a focus operator.

²⁵It is not necessarily the case that all focus phrases have to be DPs of this sort, but DPs are the focus phrases for which we can best motivate their existence.

- (369) a. I'm sorry, Mary only ever dates [firemen who love CATS_F]_{FP}.
 b. *I'm sorry, Mary only dates [firemen who ever love CATS_F]_{FP}.
- (370) a. I'm sorry, Mary doesn't date [firemen who love DOGS_F]_{FP}, but firemen who love CATS.
 b. ??I'm sorry, Mary doesn't date [firemen who love DOGS_F]_{FP}, but CATS.²⁶

Evidence that the FP exists, or that the FP associates with an operator via movement, is difficult to argue using solely Kwak'wala data – these arguments depend on aspects of English syntax that do not always have direct parallels in Kwak'wala.²⁷ Nonetheless, adopting the basic concept is valuable when describing Kwak'wala exclusive operators (§7.3, §7.5.4), which vary not according to the type of the focus itself, but to a potentially larger phrase that contains the focus. I will adopt the following assumptions about focus association:

- Focus operators do not directly take *foci* as their arguments.²⁸
- Rather, focus operators take as their arguments a syntactic constituent, the focus phrase, that contains one or more foci.
- The relationship between focus operators and focus phrases, if not local, is mediated by movement.

5.6.3 Two mechanisms

This is therefore a “two mechanism” system, like the system in Krifka (2006), that resolves the meaning of sentential operators by two different mechanisms. The syntactic mechanism creates a partition that the operator takes as an argument, and the *in-situ* mechanism determines which alternatives are relevant.

For illustration, if we assume that the structure of (371a) is something like that in (371b), and assume that the FP moves to be a direct argument of “only”, then after this movement “only” would have two arguments, the FP (371c) and the property corresponding to the remnant of movement (371d).

²⁶This has a reading (that Mary dates cats) but not the intended reading (that Mary dates firemen who like cats).

²⁷For example, I have not managed to find any elements that act as NPIs; the equivalents of English NPIs like “ever”, “any”, “anymore”, etc. either do not appear to exist, or are permissible in positive contexts as well.

I do, however, present a judgment in (7.3.2.4) roughly parallel to the Drubig-style (1994) examples in (370).

²⁸That is, they do not directly take foci as their arguments except in those sentences, like “Mary dates only FIREMEN_F”, in which the focus phrase consists solely of the focus.

- (371) a. I only convinced the linguists_F in Vancouver.
 b. [I [ONLY [convinced [the linguists_F in Vancouver]_{FP}]]]
 c. *the linguists in Vancouver*
 d. $\lambda x.\lambda y.y$ convinced x

In Krifka (2006), the correct alternatives to “the linguists in Vancouver” are available as a Roothian secondary denotation, the appropriate Rooth-Hamblin set having been “built up” compositionally in parallel to the ordinary denotation. In this system, alternatives are “available” only by binding, and foci are bound only at the top level. However, since denotations are relativized to C , operators have access to the relevant information indirectly: the position of focus puts constraints on the value of C , through SAY, and operators have access to C .²⁹

5.6.4 Contextual constraint

It is necessary, by some mechanism, to further constrain alternative sets to those actually relevant to the discourse; in this system this is done through C .³⁰

The denotations of focus operators are not simply constrained by the location of focus, but which alternatives are actually relevant. This is easiest to see with exclusive operators, in which the alternatives excluded are a matter of the truth conditions; (372b) does not necessarily say anything about whether Chris graduated.

- (372) a. Did Alice and Bernie graduate?
 b. Only Alice graduated.
 \Rightarrow Bernie did not graduate.
 \nRightarrow Chris did not graduate.

Therefore, the domain over which “only” quantifies in (372b) is something like the set in (373a) rather than the much larger set in (373b).

- (373) a. $\{\lambda w.\textit{that Alice graduated in } w, \lambda w.\textit{that Bernie graduated in } w\}$
 b. $\{\lambda w.\textit{that } x \textit{ graduated in } w \mid x \in D_e\}$

For a Kwak’wala example, it is unlikely that the speaker in (374) means to say “Everyone on Earth is stupid except Jon”; rather, in the context it is pretty clear that the set under consideration

²⁹We might choose to further “encapsulate” access to C via a Rooth-style \sim operator, as Beck (2006) does, rather than allow operators unconstrained access to C . I do not, however, make any use of the consequences of this choice to explain anything in Kwak’wala, so I am allowing operators to make use of C directly.

³⁰As a reminder, C represents the alternative propositions themselves, not the *form* of the alternatives. Interlocutors make meta-claims about C regarding the forms that the alternatives can take, which guides interlocutors’ hypotheses about what C currently refers to.

is {Pat, Jon}.

- (374) $\acute{k}i\text{?}su\check{x}$ $no\check{g}adu\check{x}$ Pat, $higa\mu\check{x}$ Jon $no\check{g}ada$.
 $\acute{k}i\text{?}s=u\check{x}$ $noq\text{-}_w ad=u\check{x}$ Pat, $higa=?m=u\check{x}$ Jon $noq\text{-}_w ada$
 not=3MED heart/mind-REL=3MED Pat, only=VER=3MED Jon heart/mind-REL
 “Pat’s not smart; only Jon is smart.”

So likewise, the domain over which the Kwak’wala exclusive operator *hig-* quantifies in (374) is something like the set in (375a) rather than the much larger set in (375b).

- (375) a. $\{\lambda w.that\ Pat\ is\ smart\ in\ w,\ \lambda w.that\ Jon\ is\ smart\ in\ w\}$
 b. $\{\lambda w.that\ x\ is\ smart\ in\ w\ | x \in D_e\}$

So, it seems that operators must have access to sets like those in (373a) and (375a) – that is, they have some manner of access to the contextual alternatives in *C* – and if it has access to these sets, then the broader sets in (373b) and (373b) do not provide additional information to the operator.

In other words, operators do not necessarily need access to F-closures if they have access to *C*; since by the congruence meta-presupposition the latter is a subset of the former, access to F-closures would be redundant. This resolves the problem of operator binding detailed in §5.6.1; operators no longer need to bind foci, since they no longer need to calculate F-closures.

In my denotations of Kwak’wala focus operators in the chapters that follow, operators quantify over propositions in $\bigcup C$ that match the forms they can compose from their arguments. Roughly, the meta-presupposition of SAY constrains $\bigcup C$ such that it contains only propositions of the form *that I convinced the x in Vancouver*, and then “only” denies any proposition in $\bigcup C$ of the form *that I convinced the x that is not that I convinced the linguists in Vancouver*.

5.7 Summary

In §1.6, I argued that some sentential elements act in a peculiar way, such that in some calculations they must have a fixed meaning (like, *Alice* or *the linguists in Vancouver*), but in other calculations they seem to have a variable meaning (*x* or *the x in Vancouver*). I adopt Wold’s (1996) adaptation of Kratzer’s (1991) focus semantics, as a straightforward implementation of this idea.

In this model, WH- elements, indefinites, and disjunctions are all implemented as distinguished variables, like “what” in (376), and receive their values from operators that bind them (be these quantifiers, choice functions, speech acts, etc.); I term these **O-variables**.

$$(376) \quad \llbracket \text{what}_1 \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} g(1), & \text{if } 1 \in \text{Dom}(g), \\ \text{undefined}, & \text{otherwise} \end{cases}$$

Foci correspond to a special kind of distinguished variable, termed **F-variables**. A focus usually denotes its ordinary denotation, but a co-indexed operator (in particular, the speech-act operator SAY) can, by introducing a mapping to the assignment function g , treat the focus as a variable (§5.2.2.2) instead.

$$(377) \quad \llbracket \beta_{F_i} \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} g(i), & \text{if } i \in \text{Dom}(g) \\ \llbracket \beta \rrbracket^g, & \text{otherwise} \end{cases}$$

The “alternatives” to an utterance are implemented by existential closure, in which O and F indices i_1, i_2, \dots, i_n are valued via existential quantification; I abbreviate this operation as $\llbracket \rrbracket_{i_1, i_2, \dots, i_n}^g$ (§5.2.3). When applied to O indices, I term it the O-closure; when applied to both O and F indices, I term it the F-closure.

$$(378) \quad \llbracket \alpha \rrbracket_{i_1, i_2, \dots, i_n}^g \stackrel{df}{=} \{ \llbracket \alpha \rrbracket^{g \cup \{ \langle i_1, x_1 \rangle, \langle i_2, x_2 \rangle, \dots, \langle i_n, x_n \rangle \}} \mid x_1 \in D_{\tau_1}, x_2 \in D_{\tau_2}, \dots, x_n \in D_{\tau_n} \}$$

Congruence is modeled by having speech acts make claims about a contextual variable C roughly corresponding to the “question under discussion”. C is a set of sets of propositions, where these alternative sets potentially represent a variety of utterance types: true questions, assertions, disjunctions, etc. (§5.3.1). Claims about C are termed “meta-assertions” and “meta-presuppositions”, to disambiguate them from ordinary assertions and presuppositions; while ordinary claims address the Big Question “What is the way things are?”, meta-claims address the Big Metaquestion “What are we talking about?” (§5.3.2).

A single speech-act operator, SAY, handles the meta-claims of both questions and assertions by asserting specific relationships of C and certain existential closures of the sentence. The superscripts i_1, i_2, \dots, i_n co-index bound O variables, the subscripts j_1, j_2, \dots, j_m co-index bound F variables (§5.3.2.1, §5.3.2.2).

(379) If $\alpha = [\text{SAY}_{j_1, j_2, \dots, j_m}^{i_1, i_2, \dots, i_n} \beta]$, then

$$\llbracket \alpha \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} \exists c \in C [c \subseteq \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n}^{g,C}], & \text{if } \forall c \in C [c \subseteq \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n, j_1, j_2, \dots, j_m}^{g,C}] \\ \text{undefined}, & \text{otherwise} \end{cases}$$

Utterances meta-assert that some alternative set c in C is a subset of the O-closure of the utterance, and meta-presuppose that every alternative set c in C is a subset of the F-closure. Meanwhile, an AVOIDF principle, hypothesized to be a meta-implicature, constrains the use of

O and F variables to a minimum (§5.3.2.3). Congruence and incongruence are modeled as the consistency and inconsistency of the meta-claims of a series of utterances (§5.3.3).

Chapter 6

Focus expression in Kwak’wala

6.1 Introduction

Cross-linguistically, focus is expressed in a variety of ways, by phonological cues such as pitch contour, by syntactic phenomena such as scrambling or movement to a dedicated focus position, or by morphological phenomena such as dedicated affixes or clitics (Lambrecht, 1994; Büring, 2009; Féry, 2008a).

It is useful, in describing Kwak’wala focus, to divide focus expressions into two different types: the kind of focus that we find when answering WH questions and expressing contrast between constituents (I will call this “constituent-type” contrast), and the kind of focus that we find when answering yes/no questions and expressing polarity contrasts (this is usually called *verum* focus after Höhle, 1988). Here I will consider the former type, and in Chapter 8 I will consider the latter type.

Focus in response to a WH question is expressed primarily syntactically, by two constructions: the cleft (380b) and the nominal predicate construction (NPC) (381b). In this chapter, I will examine such sentences in greater detail, and attempt to consider why focus interpretations are restricted when these structures are used.

- (380) a. ʔəng^wida gaǰεʔ suǰ^vda hima^yəǰ
 ʔng^w=i=da gaǰa=aʔ s=uǰ^w=da hima^y=q
 who=3_{DIST}=DET bring=INVIS OBL=3_{MED}=DET food=VIS?
 “Who brought the food?”

- b. yuduǎda gǎla gaǎ sa himayǎǎ
 yu=d=uǎ=da gla gaǎ sa himay=q
 be.3MED=DET=3MED=DET bear come OBL food=VIS
 “It’s **the bear** who brought the food.”
- (381) a. maǎalǎi ǎocu?ǎo?o?s laǎ Jon
 maǎal=ǎ=i ǎo-cw=ǎ=o?=u?s l=(a)ǎ Jon
 what=FUT=3DIST give-PASS=FUT=INVIS=2POSS PREP=ACC Jon
 “What are you going to give to Jon?” (Lit: “That one given by you to Jon is what?”)
- b. waǎiǎn ǎocu?ǎ laǎ Jon
 waǎ-i=ǎ=n ǎo-cw=ǎ l=(a)ǎ Jon
dog-NMZ=FUT=1 give-PASS=FUT PREP=ACC Jon
 “I will give Jon **a dog**.” (Lit: “The one given by me to Jon is a dog.”)

Patterns like these are familiar from other predicate-initial languages like Malagasy (Paul, 2001), Nǎe?kepmxcín (Koch, 2008), and Yukatec Mayan (Velleman, 2011), which likewise have syntactic focus marking strategies in which the focused element appears at the left periphery of the sentence.

This raises a question: in predicate-initial languages, what is it that constrains focus interpretation, predication or left-peripheral alignment? Koch (2008) provides an account of Nǎe?kepmxcín in which foci are constrained to appear in the left periphery of intonational phrases, and clefts and NPCs serve to put the focus in this position. I argue in §6.4 that this cannot serve as an account of Kwak’wala, where many foci (in the semantic/pragmatic sense) are not marked by a left-peripheral strategy, and some systematically appear on the right periphery. Instead, I suggest that Kwak’wala focus is best characterized as a set of constraints on predicate choice (§6.5).

6.2 Focus marking and focus interpretation restriction

By way of introduction, it is important to note that no particular focus marking strategy appears to be obligatory in Kwak’wala, and nor does it appear to be obligatory to mark focus at all. That is, given a particular focus context, it will not in general be possible to determine for certain what kind of focus marking will appear (cf. Bolinger, 1972), or if any will appear.¹

For example, consider a few possible expressions of “I want water”:

¹This is not unexpected, especially given Koch’s (2008) observations of Nǎe?kepmxcín, where focus constructions (despite being frequent) are not absolutely obligatory in response to questions.

- (382) a. ʔə́xʔéx̣sdən ǰa w̄ap
 ʔx̣-ʔéx̣sd=n ǰa w̄ap
 do-want=1 ACC water
 “I want water.”
- b. w̄apən ʔə́xʔéx̣sdəsəw̄eʔ
 w̄ap=n ʔx̣-ʔéx̣sd-sw̄=eʔ
 water=1POSS do-want-PASS=INVIS
 “I want water.”
- c. nug^waʔəm ʔə́xʔéx̣sda ǰa w̄ap
 nug^wa=ʔm ʔx̣-ʔéx̣sda ǰa w̄ap
 be.1=VER do-want ACC water
 “I want water.”

These expressions are not interchangeable in discourse; they have different acceptability in response to different questions:

- (383) a. mə́caliʔs ʔə́xʔéx̣sdəsəw̄əʔoʔs
 mə́cal=iʔ=s ʔx̣-ʔéx̣sd-sw̄=a=uʔs
 what=3DIST=2POSS do-want-PASS=INVIS=2POSS
 “What do you want?”
- b. ✓ ʔə́xʔéx̣sdən ǰa w̄ap
 “I want water.”
- c. ✓ w̄apən ʔə́xʔéx̣sdəsəw̄eʔ
 “I want water.”
- d. ✗ nug^waʔəm ʔə́xʔéx̣sda ǰa w̄ap
 “I want water.”
- (384) a. ʔə́ng^wida ʔə́xʔéx̣sdεʔ ǰa w̄ap
 ʔng^w=i=da ʔx̣-ʔéx̣sd=εʔ ǰa w̄ap
 who=3DIST=DET do-want=INVIS ACC water
 “Who wants water?”
- b. ✓ ʔə́xʔéx̣sdən ǰa w̄ap
 “I want water.”

- c. ✗ wápən ʔə́ʔéʔsə̀wə́ʔ
 “I want water.”
- d. ✓ nug^waʔəm ʔə́ʔéʔsə̀da ʔa wáp
 “I want water.”

We can observe, however, that there is not a *unique* appropriate answer to a given question; each of the questions can be answered in two ways. The answerer in (383) can answer with a dedicated focus construction (383c), or they can answer with an ordinary VSO sentence (383b). Likewise, the answerer in (384) can answer with a dedicated focus construction (384d), or again they can answer with an ordinary VSO sentence (384b). Focus constructions are not obligatory; speakers have various options available to them when answering questions, and in any case seem to use a variety of criteria beyond information context to decide what structure to use.

It is more profitable, I think, to examine focus from the other direction: given a particular sentence structure, what focus interpretations are possible for it? In this direction, we can make more solid conclusions: particular structures restrict possible focus interpretations in predictable ways. The answer in (383c/384c), and other answers with this same structure, are systematically restricted to contexts in which “water” is the focus; the answer in (383d/384d), and other answers with this same structure, are systematically restricted to contexts in which “I” is the focus.²

6.3 Focus and prosody?

While we can sometimes observe words that appear to be emphasized prosodically, Kwak’wala does not seem to have a *systematic* alignment between sentential foci and pitch accents. It at least seems that speakers can emphasize words by prosodic means similar to English means (duration, pitch, and loudness), but this emphasis does not systematically correspond to semantic focus (in the sense used in Chapter 1 and Chapter 5).

I should note, however, that I have not done a rigorous instrumental investigation into these phonetic correlates in Kwak’wala; my observations here are impressionistic and the pitch traces are offered primarily as illustrations rather than evidence.³

²Actually, answers with the same linear order as (383d/384d) have potentially wider interpretations, since in the first person clefts and canonical sentences seem to be ambiguous, given the absence of an overt subject. In this context, at least, the speaker who offered this paradigm seemed to be interpreting (383d/384d) with its cleft interpretation.

³Many of my recordings have a confounding factor, which is the frequency with which speakers pause to remember words. Words after these pauses nearly always have exaggerated pitch and intensity. I simply do not have many recordings in which I have a relatively controlled discourse context and am also confident that these and other confounding factors (§6.3.3) are absent.

It remains, therefore, entirely possible that there is *some* systematic phonetic difference between string-identical sentences with different focus interpretations. In a preliminary instrumental study, Noguchi (2011) found a weakly significant ($p < 0.15$) difference in pitch contour between subject-focus and object-focus VSO sentences. On the other hand, in a pilot for a potential further study, Noguchi found that the same subject did not discriminate this difference when listening to the resulting recordings (Masaki Noguchi, p.c.): although there might have been a phonetic difference between them, it may be the case that it is a difference to which speakers are not sensitive or that they do not conventionally associate with different questions under discussion.

6.3.1 Emphasis

It is important to note that it appears that Kwak’wala speakers *can* use prosodic means to emphasize particular words, and sentences differ in their intonational contours. Speakers seem to emphasize words for various reasons – to emphasize something is important, to make sure they are understood, to emphasize a word they had been trying to remember and just found – and sometimes these emphasized words correspond to semantic foci, as in (385) and (386).

(385) *Context: With my eyes closed, I have drawn a card with an animal on it. The speaker tells me it is a seal, and I ask what color it is.*

a. $\dot{t}ix\text{?}st\acute{o}w\acute{u}\check{x}da$ $mi\acute{g}^w\acute{a}t\acute{o}\check{x}$
 $\dot{t}ix\text{-?}stw=u\check{x}=da$ $mi\acute{g}^w\acute{a}t=\check{x}$
 dirt-eye=3MED=DET seal=VIS
 “What color is the seal?”

b. $\acute{t}ix\text{?}st\acute{o}w\acute{u}\check{x}da$ $mi\acute{g}^w\acute{a}t\acute{o}\check{x}$
 $\acute{t}ix\text{-?}stw=u\check{x}=da$ $mi\acute{g}^w\acute{a}t=\check{x}$
dirt-eye=3MED=DET seal=VIS
 “The seal is **brown.**”

(386) *Context: The speaker is comparing two pictures.*

a. $d^z\acute{o}lx^w\acute{s}\acute{o}me\text{?}u\check{x}da$ $si\acute{l}\acute{o}m\acute{o}\check{x}a$ $busi,$
 $d^z\acute{o}lx^w\text{-}sme\text{?}u\check{x}=da$ $si\acute{l}m=q=\check{x}a$ $busi,$
 run-after=3MED=DET snake=VIS=ACC cat,
 “The snake is chasing the cat... ”

- b. ləmís dʒəlx^wsəmeʔ ʃada **lábic** láʃada
 l=ʔm=is dʒlx^w-smeʔ ʃa=da **labic** la=ʃa=da
 then=VER=and run-after ACC=DET **rabbit** PREP=ACC=DET
 “...and over there it’s chasing the **rabbit**.”

(387) *Context: The speaker is describing two pictures, one of which has a cougar lounging on a log and the other one has a cougar lounging on a rock.*

- a. bədi laʃ^wada, k̄^wała laʃ^wa ləq^waʃ
 bdi la=ʃ^wa=da, k̄^w-ała la=ʃ^wa ləq^wa=ʃ
 cougar PREP=ACC.3MED=DET, sit-ONGOING.POS PREP=ACC.3MED wood=VIS
 “The cougar over there, it’s sitting on the log...”

- b. k̄^wálatuʃda n̄əmʃ láʃ^wada... **ʔísəm**
 k̄^w-ała=t̄=uʃ=da n̄əm=ʃ la=ʃ^wa=da... **ʔísəm**
 sit-ONGOING.POS=but=3MED=DET one=VIS PREP=ACC.3MED=DET... **rock**
 “...but the other is sitting on a **rock**.”

In (385b), (386b), and (387b), the speakers had put a clear (at least to my ear) emphasis on *t̄ixʔstu* (“brown”), *lábic* (“rabbit”), and *ʔísəm* (“rock”), and we can observe in Figs. 6.1-6.3 that their stressed syllables had correspondingly high amplitudes and pitches.⁴

However, while it happens that *t̄ixʔstu*, *labic*, and *ʔísəm* are foci, this does not necessarily mean that they were emphasized *because* they were foci; for each of these utterances I think it was likely that these are metalinguistic emphases (§6.3.3).

6.3.2 Emphasis and focus

While emphasis in the above sense *can* appear on sentential foci, there does not appear to be any *requirement* that it does, and sentences (385b) and (386b) are not the norm. Most sentences, like those in (388b) and (389b), have similar pitch peaks on each accented syllable, and a gradually declining downstep as the sentence continues; none of the syllables in these sentences were particularly emphasized, at least to my ear, in the way that those in §6.3.1 were.

⁴Note, however, that in Fig. 6.2 that the pitch peak on *la* is not significantly higher than the previous pitch accent, on *dʒəlx^w*, even if, like Koch (2008), we consider pitch excursions as beginning at a declining baseline to take into account pitch declination over the course of the sentence. I do not think this is uncommon, for “emphasized” accents of this sort to have a clear pitch excursion when compared to following accented syllables, but not when compared to preceding accented syllables.

That is to say, rather than say that the emphasized word gets a higher pitch accent than other pitch accents in the sentence, it might be better to say that following material is sometimes deaccented, while preceding material is not deaccented.

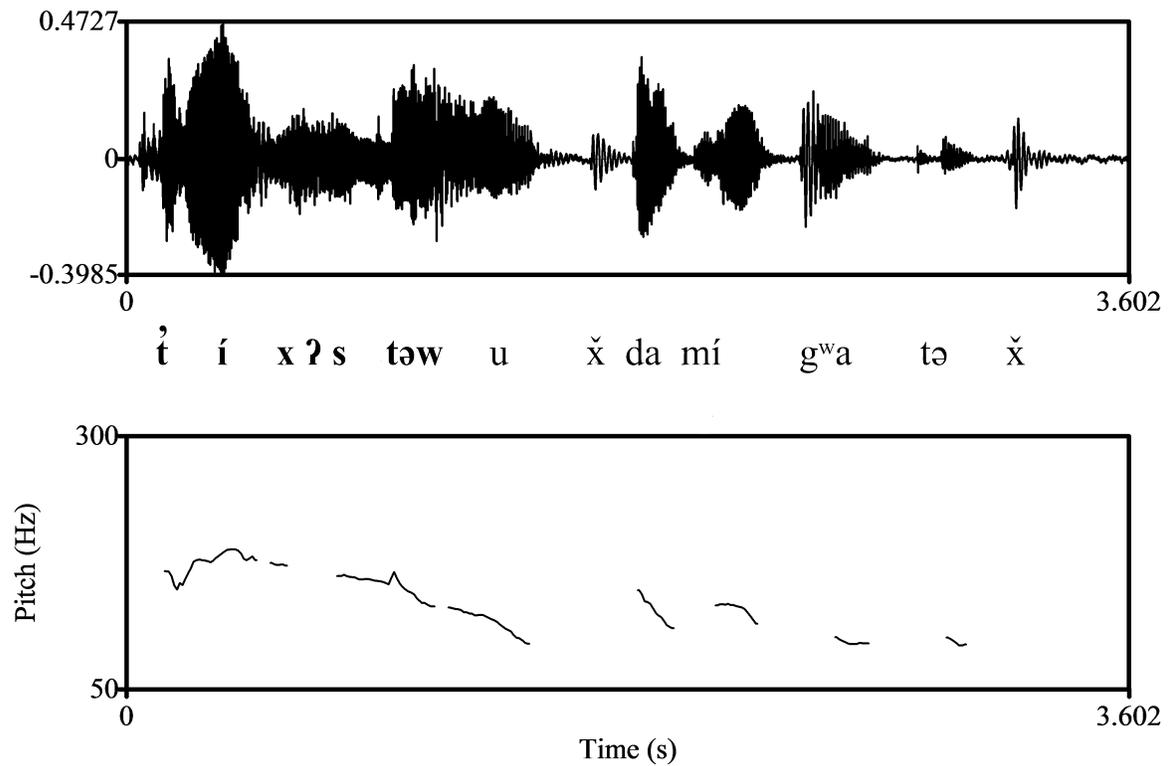


Figure 6.1: Amplitude (top) and pitch (bottom) over time for “The seal is **brown**.”

(388) *Context: In this storyboard, a squirrel and a crab are discussing who brought what to a party.*

a. $\dot{m}a\acute{c}ali$ $ga\check{x}ʔiwasa$ $gəla$
 $\dot{m}as-ha\acute{t}=i$ $ga\check{x}-xʔidʔ=sa$ gla
 what-kind=3DIST come-CHANGE?=OBL bear
 “What did the bear bring?”

b. $\dot{n}íkida$ $\acute{q}úm\acute{m}is$ $gá\check{x}ida$ $gəlá$ sa $hə\acute{m}éʔ$
 $\dot{n}ík=i=da$ $\acute{q}umis$ $ga\check{x}=i=da$ gla sa $h\acute{m}-a\acute{y}$
 say=3DIST=DET crab come=3DIST=DET bear OBL eat-NMZ
 “The crab said, ‘The bear brought **food**.’”

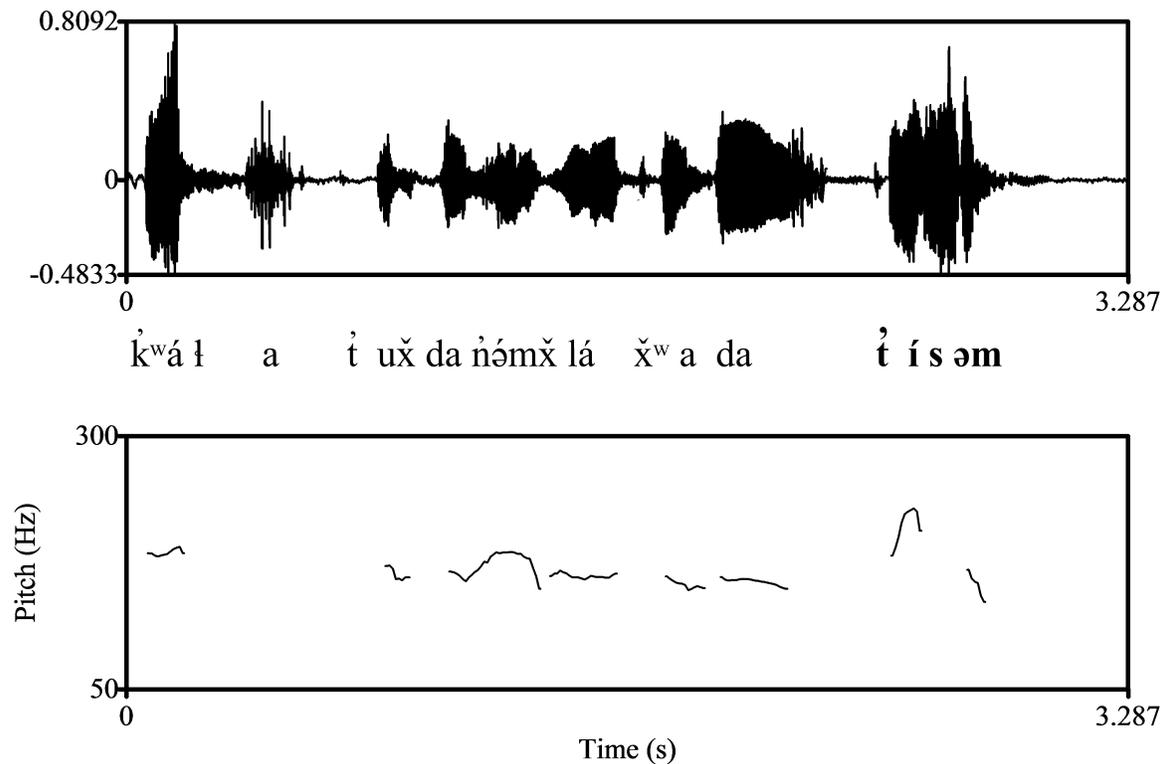


Figure 6.3: Amplitude (top) and pitch (bottom) over time for “But the other is sitting on a rock .”

These foci – *hámé?* (“food”) and *támínas* (“squirrel”) have pitch accents but not ones particularly greater than other pitch accents in the same sentence.⁵ This is not to say that nothing phonetic is going on here – it may be – but to emphasize that the pattern seen in §6.3.1, where we can see (and hear) one pitch accent singled out, is not the general rule for Kwak’wala intonation. For the most part, the pitch accents in a sentence are of roughly similar magnitude, downstepping somewhat as the sentence proceeds.⁶

Overall, Kwak’wala appears to occupy a midpoint between English on one hand and Nl̥eʔ-kepmxcín (Koch, 2008) on the other. Kwak’wala does not share the requirement (or at least the strong tendency) of English to align the primary sentential accent to the focus, but meanwhile it does not share the requirement of Nl̥eʔkepmxcín that all sentences share a fairly strict senten-

⁵*támínas* looks to be somewhat greater, but we do not see here the more dramatic post-emphasis deaccenting that we saw in Figs. 6.1 and 6.2.

⁶There is also a common pattern in which the first stressed syllable of the sentence, particularly when it falls on the first syllable of the sentence, receives little or no pitch excursion compared to neighboring syllables, often resulting in a several-syllable flat or rising melody before the second pitch accent. I have not managed to work out the details of this pattern, or whether it correlates in any way with information-structural features.

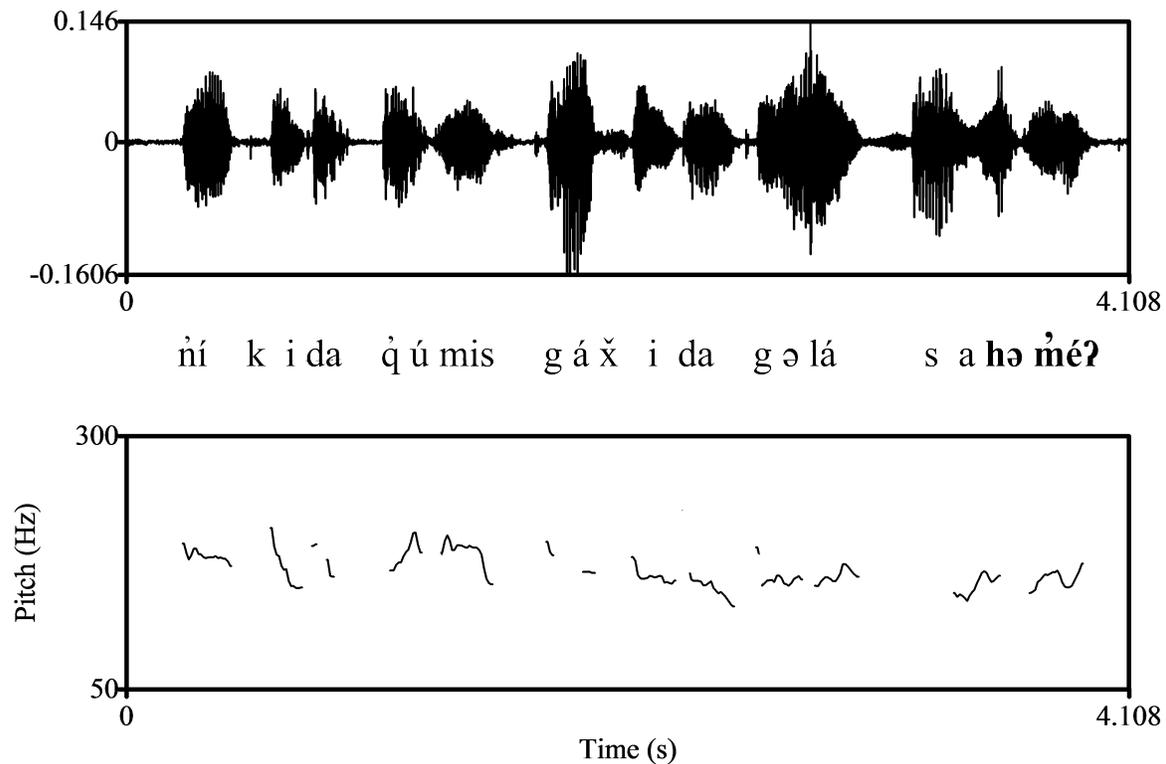


Figure 6.4: Amplitude (top) and pitch (bottom) over time for “The bear brought **food.**”

tial intonation, in which the primary accent is always right-peripheral. Kwak’wala sentences are rather variable, intonationally, compared to Nłeʔkepmxcín sentences, but this variability does not systematically correspond, so far as I can tell, with information structure as it does in English.

6.3.3 Metalinguistic focus?

My suspicion is that many instances of English-like prosodic emphasis are actually metalinguistic, and in particular the emphasis of a teacher indicating the words by which a concept can be expressed. I have encountered it often when speakers are directing their speech towards me or towards other non-speakers, whereas when directing their speech towards other speakers it is strikingly and surprisingly absent.

This emphasis most often happens in three situations:

- after discussions of that word or class of words,

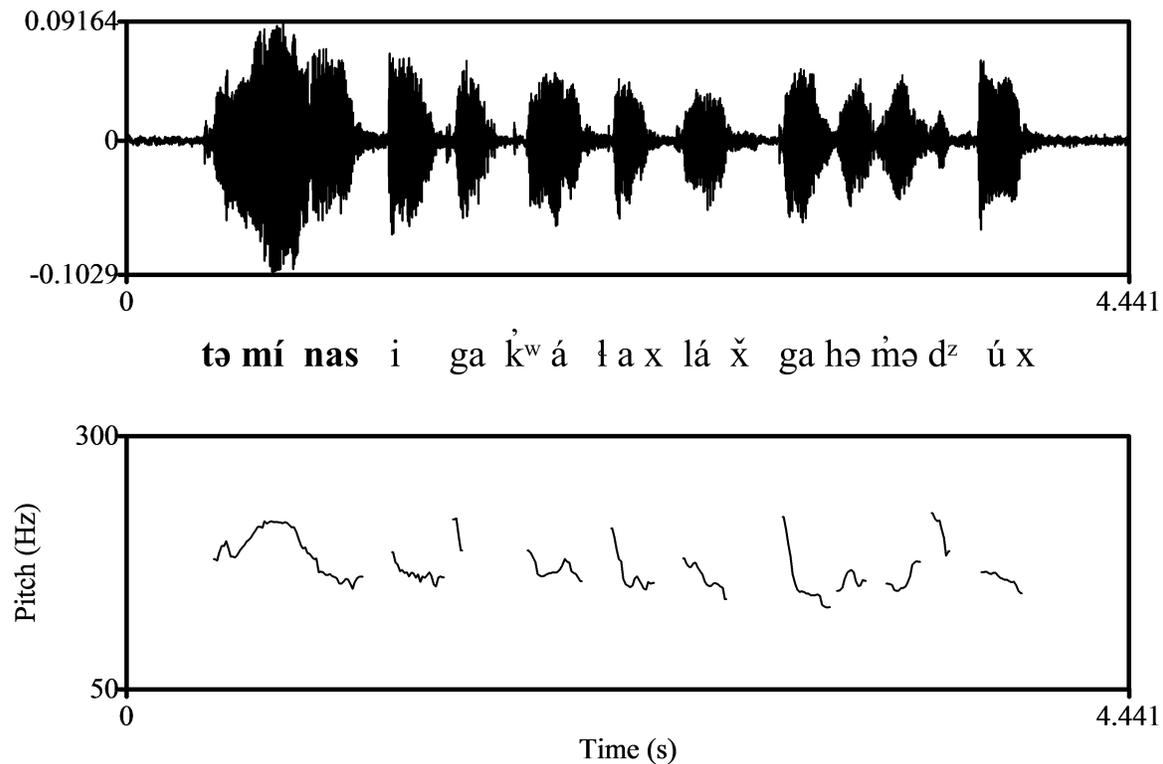


Figure 6.5: Amplitude (top) and pitch (bottom) over time for “There’s a **squirrel** sitting on this table.”

- on words of special note, like loanwords or words that speakers find interesting or humorous,
- and after short pauses in which speakers appear to be trying to recall unfamiliar or forgotten words.

For an example of the first, the question/answer pair in (385) occurred soon after a discussion of troublesome color names, in which the speakers attempted to remember an appropriate equivalent to English “brown” to describe the color of brown used on the animal cards.

For an example of the second, *labic* (“rabbit”) in (386) was of this sort; there are some English loanwords that speakers often emphasize, I think because they find them humorous or otherwise of note. This is not true for all loanwords – many are simply ordinary words and pass without note – but there are some including *labic*, *kalic*, (“carrot”) and *ka* (“car”) that are often given special emphasis.⁷

⁷This might be that they are phonologically unusual in Kwak’wala – note the final *c*’s of the first two, and

Emphasis can also sometimes be seen on Kwak’wala words that are used to replace English loans or are otherwise notable, like *ǰətəm* for “carrot”. While my consultants have reported that *ǰətəm* is not a word from their own dialect, they have purposely adopted it to avoid the use of *kalic* (“carrot”). *ǰətəm* is a word that I frequently encounter with emphasis; I do not think this emphasis is to indicate a contrast with something that is not a carrot, but to indicate a metalinguistic contrast between *ǰətəm* and *kalic*.

The overwhelmingly most common kind of emphasis, however, is the third of these: emphasis after a short pause for recollection. For example, in (387) and Fig. (6.3), the speaker paused briefly before *tisəm* (“rock”); this did not sound like an ordinary pause in a sentence but rather like the brief pause while one is trying to recollect a word.⁸

Teasing apart genuine focus and metalinguistic focus is particularly difficult. The situations in which one would want to emphasize a word to a learner have a great deal of overlap with the situations in which a word would be a focus. For example, when a learner asks a speaker, “What color is the seal?”, and the speaker answers with an emphasis on “brown”, this emphasis could either be a genuine focus (the seal is brown rather than some other color), or it could be answering a metalinguistic question (the word for the color of the seal is “brown” rather than some other word).⁹ Meanwhile, the lack of a particular emphasis on “seal” could be that the seal is non-focused or given, or it could be that the speaker knows the learner already knows the word for “seal” because they said it in the question. In a language-learning environment, the metalinguistic interpretation of the activity is almost always possible, since the overall question under discussion is always “How do we say it?”; that this emphasis is notably absent when speakers are speaking to each other makes me think that this emphasis is metalinguistic.

I think this was potentially a confound in Noguchi (2011), that the questions were posed by a learner, and the answers directed to a learner. However, I think it is still possible that there are phonetic differences between genuine foci and non-foci, or environments in which such phonetic differences can be observed; it is just that any instrumental study that attempts to tease apart focus emphasis from metalinguistic emphasis will need to pay careful attention to speech audience, as well as word frequency/difficulty, so that metalinguistic intonations do not confound the results.

unpalatalized *k* of *ka* – or that they underwent changes that made them notably different from their English forms, or both of these. Consider, in particular, the very long and intense [c] of *labic* in (6.2), which alone lasts for about 0.65 seconds.

⁸“Memory” pauses like these are so frequent in my data that it is difficult to find non-trivial sentences without them; many of my recordings are confounded by this factor.

⁹Moreover, in situations where a speaker has forgotten a word, there is always a metalinguistic question present: e.g., “What was the word for ‘seal’ again?”.

6.3.4 Enclitic and unexpressed foci

We can observe another phenomenon in Kwak’wala that suggests that there is not a necessary alignment between sentential accent and semantic focus.

In English, enclitic pronouns – the reduced form of pronouns like “him” and “her” that encliticize to the previous word as “’im” or “’er” – cannot serve as sentential foci, or the associates of focus-sensitive operators like “only”.

- (390) a. “Who did you kiss?”
 b. “I kissed him.”
 c. #“I kissed’im”.

- (391) “I only kissed’im.”
 = I did not do anything but kiss him.
 ≠ I did not kiss anyone but him.

This is a straightforward consequence of an accent/focus constraint; if focused pronouns must be accented, and enclitic pronouns cannot be accented, then enclitic pronouns cannot be foci.

This is not the case in Kwak’wala, however; as noted in §4.2.4, enclitic pronouns can indeed be foci. This is especially clear when we examine sentences with focus-sensitive operators: the pronominal elements must be foci, or else the meanings would come out incorrectly, but these pronouns are all enclitic.

- (392) *higəʔəms wəl gəwala gaʃən*
hig=ʔm=s wəl gw-ala gaʃ=n
 only=VER=2 can help-ONGOING come=1
 “**You**’re the only one who can help me.”

- (393) *Context: We are comparing my collection of pets, just one cat, to someone else’s comparative menagerie.*

higamən ʔəʃnug^wadida
higa=ʔm=n ʔʃ-nuk^w-_wad=i=da
 only=VER=1 do-have-REL=3DIST=DET
 “**It**’s the only thing I have.”

(394) *Context: We were sport-fishing and someone else caught a shoe.*

loλʔəmχəʔən ǎa tíbayu
 la-w-λ=ʔm=ǎa=n ǎa típ-wayu
 go-out-obtain=VER=ADD.FOC=1 ACC step-INSTR
 “I got a shoe too!”

We can also observe that focused elements need not have overt expressions at all, as in (395), where the third-person associate of *hig-* is unexpressed. It is *possible* to express the third-person associate of *hig-* with =*i* or =*ida*, as in (393), but it is not necessary.

(395) higəʔitʔəm
 hig-witʔm
 only-indoors=VER
 “Only he/she/it is in the house.”

(396) higəʔəm həmapsuʔsəǎs
 hig=ʔm hm-ap-sw̄=s=q=s
 only=VER eat-consume-PASS=OBL=VIS=3POSS
 “He eats only [meat].” (Lit: “[It] is-the-only eaten-by-him.”)

6.3.5 Recap

In general, it is difficult to maintain that there is any strict correspondence between sentential accent and focus in Kwak’wala. While the intonational contours of sentences vary, and sometimes there is a notable emphasis on the focus, this is not, so far as I have observed, a property of Kwak’wala sentences in general. That is to say, we can occasionally observe emphasized words in Kwak’wala, and sometimes those words are foci, but I have not observed a systematic accent/focus correspondence rule. We can also observe that English restrictions that are likely consequences of that rule, like the inability of enclitic and unexpressed pronouns to be foci, are not restricted in this way in Kwak’wala. I suggested in §6.3.3 that at least some of the apparent accent/focus correspondence in Kwak’wala is metalinguistic.

6.4 Focus and left-edge alignment?

The lack of a focus-accent correspondence would not necessarily mean that the focus is not fundamentally a phonological phenomenon, however. Koch (2008) presents a compelling hy-

pothesis in which intonational patterns like those seen in Germanic languages and syntactic patterns like those seen in Salishan languages are both instances of alignment between foci and intonational *edges*.

Nl̥ɛʔkepmxcín provides a clear counterexample to hypotheses (such as those in Reinhart, 1995) that correspondences between focus and sentential accent are universal. Nl̥ɛʔkepmxcín nuclear accent is invariably at the right periphery of the sentence, while its focus marking strategies always realize focus at the left periphery of the sentence, leading to a systematic focus/accent mismatch. Koch proposes that focus is not universally *accent*-sensitive, but is universally *edge* sensitive, and the apparent alignment between foci and accents is because accents are edge-sensitive as well. In many languages, like English and Hungarian, both foci and sentential accents align to the same edges (right and left, respectively), leading to an apparent focus/accent alignment, but some languages like Nl̥ɛʔkepmxcín align focus leftward while aligning accent rightward. Languages can achieve these alignments by various means; while English has the freedom to shift intonational “edges” so that its focus is right-edge-aligned, Nl̥ɛʔkepmxcín lacks this intonational freedom and can only left-align foci by syntactic means like clefts and NPCs.

This is initially compelling for Kwak’wala as well, since Kwak’wala likewise has focus constructions that align the focused constituent towards the left edge. However, if we examine Kwak’wala in more detail, we find that many foci – perhaps most – would not be left-peripheral, and moreover that some kinds of foci are systematically *right*-peripheral.

6.4.1 “Unfocused” sentences

The most problematic aspect of this account is that Kwak’wala focus constructions do not seem to be quite as common as they are in Nl̥ɛʔkepmxcín.¹⁰ It is not at all uncommon to encounter sentences that would have to have a semantic focus in the sense used in Chapter 5, in order to satisfy question-answer congruence, or in order to have the correct truth or use conditions, but receive no special focus marking and whose foci are not left-aligned.

For example, during one card game (§1.8.4), an elicitor asked a speaker 40 questions that targeted argument focus (that is, “who” and “what” questions rather than “what happened” questions). Of the answers, 9 answers received a special focus construction (all of them clefts like 397b), whereas the other 31 answers received ordinary VSO sentences (like 398b).¹¹

¹⁰Koch (2008) also finds that focus constructions are not obligatory, but nonetheless the overwhelming majority of answers to subject and object-focus questions received some kind of focus marking. In Kwak’wala, it is quite common to encounter unfocused sentences.

¹¹There is a strong tendency for foci referring to humans (and in some contexts, animals) to receive a focus marking construction, and other foci to not be marked syntactically. For example, in the game described above, 9

We might say that these 31 answers do not have foci, and therefore are not counterexamples, but this is problematic for both methodological and empirical reasons. Methodologically, our evidence for $=u\check{x}$ *Ruby* (“Ruby”) being a focus in (397b) is just as good as the evidence that $=s=u\check{x}=da$ *wəqes* (“the/a frog”) is a focus in (398b).

- (397) a. ʔəng^wida $\text{ʔə}\check{x}\text{ʔalil}\epsilon\text{ʔ}$ *sa busi*
 $\text{ʔng}^w=i=da$ $\text{ʔ}\check{x}\text{-ga}\check{l}\text{-}_w\text{il}=a=a\text{ʔ}$ *sa busi*
 who= 3_{DIST} = 3_{DIST} do-move.to-in.house= $A=INVIS$ OBL cat
 “Who put down a cat [card]?”
- b. *yudu* \check{x} **Ruby** $\text{ʔə}\check{x}\text{ʔalil}\epsilon\text{sa}$ *busi*
 $yu=d=u\check{x}$ **Ruby** $\text{ʔ}\check{x}\text{-ga}\check{l}\text{-}_w\text{il}=a=sa$ *busi*
 be. 3_{MED} = $DET=3_{MED}$ **Ruby** do-move.to-in.house= $A=OBL$ cat
 “It was **Ruby** who put down a cat [card].”
- (398) a. $\text{m}\acute{a}\check{c}a\check{l}u\check{x}$ $\text{ʔə}\check{x}\text{ʔalil}\epsilon\text{sa}\text{ʔsu}\check{x}$ *Masaki*
 $\text{m}\acute{a}\text{-}_h\text{a}\check{l}=u\check{x}$ $\text{ʔ}\check{x}\text{-ga}\check{l}\text{-}_w\text{il}\text{-}_w\text{as}=a=a\text{ʔ}=s=u\check{x}$ *Masaki*
 what-kind= 3_{MED} do-move.to-in.house-NMZ= $A=INVIS=3_{POSS}=3_{MED}$ *Masaki*
 “What did Masaki put down?”
- b. $\text{ʔə}\check{x}\text{ʔalil}\epsilon\check{x}\text{as}u\check{x}\text{da}$ **wəqes**
 $\text{ʔx-ga}\check{l}\text{-}_w\text{il}=u\check{x}=as=u\check{x}=da$ **wqes**
 do-move.to-in.house= $3_{MED}=OBL=DET$ **frog**
 “He put down **a frog** [card].”

We cannot use focus marking as a necessary condition for being considered a focus; if the only constituents that we accept as focus are those in clefts and NPCs, then the conclusion that foci are left-aligned becomes circular.

This is not the only reason, however, to consider an alignment account of Kwak’wala focus problematic. Even if we did discard sentences like (398b) as not having foci at all, there are many sentences that would need to have foci for semantic reasons but do not align these foci leftward.

6.4.2 Focus-final exclusive sentences

One notable type of sentence in which a focus is semantically necessary but *not* left-aligned are “canonical” order *higa* (“only”) sentences (§7.3.2.2), like in (399a). It is possible to left-align

out of 9 clefts had human-referent foci, whereas only 1 out of 31 VSO sentences had a human-referent focus.

this subject using a “cleft” order as in (399b), but this is rare at best; sentences with passivized copular complements nearly always receive “canonical” order.

- (399) a. $higəʔəm$ $həmeʔsuʔeʔeda$ $k^wənik^w$
 $hig=ʔm$ $hm-ay=s=uʔ=a=i=da$ k^wns-wk^w
 $only=VER$ $eat-NMZ=3POSS=3MED=EMBED=3DIST=DET$ **bake.bread-PART**
 “**Bread** is the only thing she eats.” (Lit: “Bread is the only thing eaten by her.”)
- b. $higamida$ $k^wənik^w$ $həmeʔsuʔ$
 $higa=ʔm=i=da$ k^wns-wk^w $hm-ay=s=uʔ$
 $only=VER=3DIST=DET$ **bake.bread-PART** $eat-NMZ=3POSS=3MED$
 “It’s only **bread** that she eats.” (Lit: “It’s bread that’s the only thing eaten by her.”)

Sentences like (399a) pose a problem for an alignment account. $=ida k^wənik^w$ has to be a focus in order to calculate the correct meaning of this sentence, but in this and similar sentences it is aligned to the *right* edge of the sentence, even though expressing it further towards the left-periphery (399b) is a possibility.

In general, exclusive focus sentences in Kwak’wala pose a problem for focus/edge alignment theories. Kwak’wala has a wide variety of ways to express exclusive focus, and whatever structure is chosen there are often other structures that would express it with the focus further towards the left edge. For example, in (400a), the speaker has used a different exclusive operator ($ʔo-$, which associates with VPs, rather than $hig-$, which associates with DPs, cf. §7.3.4.2, §7.3.2.2), and expressed “bread” ($k^wənik^w$) within the denominal verb $k^wək^wənix^wga$ (“to eat bread”). This moves the associate ($k^wənik^w$) further to the left periphery (not entirely to the left, but as far to the left as it would be in a cleft). It is even possible to move this entirely to the left periphery; since $ʔo-$ can occur postpredicatively, as in (400b). These alternative expressions are not obligatory, however, and nor are they especially common.

- (400) a. $ʔoʔəmʔi$ $k^wək^wənix^wgaʔi$ Hannah
 $ʔwa=ʔm=ʔ=i$ $k^w-k^wns-wk^w-ga=ʔ=i$ Hannah
 $SO=VER=FUT=3DIST$ **REDUP-bake.bread-PART-eat=FUT=3DIST** Hannah
 “Hannah’s only going to **eat bread**.”
- b. $k^wək^wənix^wgaʔi$ $ʔoʔəmʔi$
 $k^w-k^wns-wk^w-ga=ʔ=i$ $ʔwa=ʔm=ʔ=i$
 $REDUP-bake.bread-PART-eat=FUT=3DIST$ $SO=VER=FUT=3DIST$
 “She’s only going to **eat bread**, that’ll be all.”

6.4.3 Focus inside determiner phrases

Another “optional” ordering that we can observe in Kwak’wala concerns the ordering of elements inside DPs. As noted in §3.4.2, relative clauses can either precede or follow the nouns that they modify.

(401) *Context: Laura brought home two fish, one of which she caught and the other of which she purchased at the store, but I only ate the purchased fish.*

a. higamən həm̩xʔicuʷuʔs kəlwanəmuʔs k̩utəla
 higa=ʔm=n h̩m̩-xʔid-s̩w̩=uʔs klx^w-_wanm=uʔs k̩utla
 only=VER=1 eat-CHANGE-PASS=2POSS **buy-obtained**=2POSS salmon
 “I only ate the fish you **bought**.”

b. higamən həm̩xʔicuʷuʔs k̩utəluʔs kəlwanəm
 higa=ʔm=n h̩m̩-xʔid-s̩w̩=uʔs k̩utl̩=uʔs klx^w-_wanm
 only=VER=1 eat-CHANGE-PASS=2POSS salmon=2POSS **buy-obtained**
 “I only ate the fish you **bought**.”

(402) *Context: Laura caught two fish, one spring salmon and one sockeye, but I only ate the spring salmon.*

a. higamən həm̩ʔicəwida
 higa=ʔm=n h̩m̩-xʔid-s̩w̩=i=da
 only=VER=1 eat-CHANGE-PASS=3DIST=DET
 sačəm kiʔanəms Lola¹³
 sas-_{eh}m kiʔ-_wanm=s Lola
spring.salmon-genuine net.fish-obtained=3POSS Laura
 “I only ate the **spring salmon** that Laura caught.”

b. higamən həm̩ʔicəwida
 higa=ʔm=n h̩m̩-xʔid-s̩w̩=i=da
 only=VER=1 eat-CHANGE-PASS=3DIST=DET
 kiʔanəm sačəms Laura
 kiʔ-_wanm sas-_{eh}m=s Laura
 net.fish-obtained **spring.salmon-genuine**=3POSS Laura
 “I only ate the **spring salmon** that Laura caught.” (lit: “Laura’s net-caught spring salmon”)

The relative order of the head and the modifier, however, does not matter to the interpretation; there is no requirement that the listener interpret the further-left one as focused. In general, the speaker felt that the head-final form (the one with the *-anəm* verbal form first) was more natural in *both* contexts (unlike the Nlɛʔkepmxcín result in Koch, 2013), even though in (402b) that means a focus that is further from the left.

6.5 Focus and predication

The factors above make it difficult to maintain a focus/edge alignment account of clefts and NPCs. These do not, themselves, argue against Koch’s (2008) thesis that a focus/edge alignment constraint is active in Nlɛʔkepmxcín, but they do argue against the idea that the reason predicate-initial languages use clefts and NPCs is always to make foci left-peripheral.

Why, then, are clefts and NPCs interpreted as “focusing”? I think it is valuable to pursue this question in the opposite direction: that focus-marking strategies in predicate-initial languages have these left-peripheral focus-marking strategies (e.g. clefts and NPCs) because these are sentences in which foci are predicates, and predicates are initial anyway (Davis, 2007). More broadly, I will suggest that there might be nothing special about these constructions with respect to focus *marking*, beyond a broader principle that the choice of predicate in a sentence restricts the range of possible focus interpretations of that sentence.

To begin, we can look at the possible patterns of focus interpretation for various types of Kwak’wala predicates.

6.5.1 Verbal predicates

Sentences with a verbal predicate appear to be acceptable in any discourse context. For one, they are the usual sentences in “out-of-the-blue” contexts.

- (403) du^{x̣w}ʔaλələn x̣ən ǵagadəsʉʔλən x̣^wa n̄ala
duq^w-ʔaλ-l=n x̣=n ǵak-_wad-sw̄=λ=n x̣^wa n̄ala
see-achieve-ONGOING=1 ACC=1POSS woman-REL-PASS=FUT=1 ACC.3MED day
“Today, I saw the woman I’m going to marry.”

They are frequently used as answers to questions, no matter whether the question questions the action/state (404), agent (405), patient (406), or other participant (407-408).

¹³Laura’s name varies between its English pronunciation and its Kwak’wala pronunciation (*Lola*) between these examples.

(404) *Context: A cougar has been stalking and stealing chickens, and I spot it.*

a. w̄igilas sa
 w̄i-gi-la=s sa
 what-do-ONGOING=2 OBL
 “What did you do to it?”

b. dʷəlɣ˦səmeʔən ʧa
 dʷɿɣ˦-smaȳ˦=n ʧa
 run-after?=1 ACC
 “I chased it.”

(405) *Context: We were playing a card game where the higher-numbered animal card “eats” the lower-numbered animal card.*

a. mačalida həmɣʔideʔ ʧa siłəm
 mas-_hat=i=da hm-xʔid=a=aʔ ʧa siłəm
 what-kind=3DIST=DET eat-CHANGE=a=INVIS ACC snake
 “What ate the snake?”

b. həmɣʔidux̄da ɣ̄umisəʧ ʧux̄da siłəm
 hm-xʔid=ux̄=da ɣ̄umis=q ʧ=ux̄=da siłəm
 eat-CHANGE=3MED=DET crab=VIS ACC=3MED=DET snake
 “The crab ate the snake.”

(406) a. mačali gaʧiwasa siłəm
 mas-_hat=i gaʧ-iwa=sa siłm
 what-kind=3DIST come-??=3POSS snake
 “What did the snake bring?”

b. gaʧida siłəm sa nənɣ̄uma
 gaʧ=i=da siłm sa n-nq-ʔuma
 come=3DIST=DET snake OBL REDUP-drink-thing
 “The snake brought the drinks.”

(407) a. masi təpʔidayus̄x̄ Pateʧ ʧa k̄wəʔsta
 mas=i tp-(x)_hid-_wayu=s=uʧ̄ Pate=q ʧa k̄w-ʔsta
 what=3DIST break-CHANGE-INSTR=3POSS=3MED Pat=VIS ACC sit-in.water
 “What did Pat break the cup with?”

- b. təp̥idux̥ Pate sa k̥ʷəʔsta ʔəʃəla sa hama
 tp-(x)_hid=uʃ Pate sa k̥ʷ-ʔsta ʔʃ-la sa hama
 break-CHANGE=3MED Pat OBL sit-in.water do-ONGOING OBL hammer
 “Pat broke the vase with a hammer.”
- (408) a. ʔəngʷiʔs gəluʔagiloʔos ʃʷa guʔdan?
 ʔngʷ=i=ʔs gl-uʔa-gil=a=us ʃʷa gʷdan?
 who=3DIST=2POSS crawl-obtain-reason=INVIS=2POSS ACC.3MED horse?
 “Who did you steal the horse for?”
- b. gəluʔidən qeʔe Sarah
 gl-uʔ-(x)_hid=n qʔ=i Sarah
 crawl-obtain-CHANGE=1 for=3DIST Sarah
 “I stole it for Sarah.”

We can see below an example of multiple focus in a verbal-predicate sentence. Multiple foci are difficult to show in question-answer pairs, since multiple WH questions cannot be constructed, but questions like (409), where we question a hypernym, can result in answers that both respond to the WH element and specify a hyponym (410).

- (409) ʔəngʷida loʔεʔ ʃa k̥utəla
 ʔngʷ=i=da la-w-ʔa=aʔ ʃa k̥utla
 who=3DIST=DET go-out-obtain=INVIS ACC fish
 “Who caught a fish?”
- (410) loʔux̥ Masaki ʃa məʔik
 la-w-ʔ=uʃ Masaki ʃa məʔik
 go-out-obtain=3MED Masaki ACC sockeye
 “Masaki caught a sockeye.”

Verbal predicate sentences, therefore, do not appear to constrain focus interpretation in any way; it appears that they can serve to answer any kind of question.

6.5.2 Nominal predicates

Along with clefts (§4.3), nominal predicate constructions are one of the primary ways of marking focus in Kwakw’ala. Nominal predicates are associated with restrictions on focus interpretation that sentences with verbal predicates lack.

It is important to note, however, that nominal predicates themselves are not inherently focusing. Predicates in Kwak’wala are frequently nominal, and do not always carry focus restrictions. A sentence with just a proper name and a nominal predicate is not restricted to “What is he/she/it?”-type questions, but can also be used in “Who is an *X*?” contexts.

(411) a. $\acute{m}a\acute{c}a\lambda u\check{x}$ Pat?
 $\acute{m}as\text{-}_h a\lambda=\lambda=u\check{x}$ Pat?
 what-kind=FUT=3MED Pat?
 “What will Pat be?”

b. ✓ $dag^w\acute{e}da\lambda u\check{x}$ Pat
 $dag^w da=\lambda=u\check{x}$ Pat
 doctor=FUT=3MED Pat
 “Pat will be a doctor”

(412) a. $\text{ʔ}\acute{o}ng^w ida$ $dag^w\acute{e}da\lambda\epsilon\text{ʔ}\text{ʔ}$
 $\text{ʔ}ng^w=i=da$ $dag^w\acute{e}da=\lambda=a=a\text{ʔ}\text{ʔ}$
 who=3DIST=DET doctor=FUT=a=INVIS
 “Who’s going to be a doctor?”

b. ✓ $dag^w\acute{e}da\lambda u\check{x}$ Pat
 $dag^w da=\lambda=u\check{x}$ Pat
 doctor=FUT=3MED Pat
 “Pat will be a doctor”

Rather, it is the choice of a nominal predicate *instead of* a verbal or adjectival predicate that seems to cause focus restriction. We have already seen a number of noun-verb examples in §3.5, showing that the choice of a nominal predicate, when a potential verbal predicate was available, restricts focus interpretations to those in which the nominal is focused. Another set of examples is given in (413-416).

(413) a. $\text{ʔ}\acute{o}ng^w ida$ $d\acute{e}n\check{x}\acute{o}\lambda\epsilon\text{ʔ}\text{ʔ}$
 $\text{ʔ}ng^w=i=da$ $dn\check{x}\text{-}l=a=a\text{ʔ}$
 who=3DIST=DET sing-ONGOING=a=INVIS
 “Who is singing?”

- b. ✓ dənǰəlida cǎya
 dnǰ-l=i=da cǎya
 sing-ONGOING=3DIST=DET younger.sib
 “The younger sibling is singing.”
- (414) a. wǐgilida cǎya?
 wǐ-gi-l=i=da cǎya
 what-do-ONGOING=3DIST=DET younger.sib
 “What is the younger sibling doing?”
- b. ✓ dənǰəlida cǎya
 dnǰ-l=i=da cǎya
 sing-ONGOING=3DIST=DET younger.sib
 “The younger sibling is singing.”
- (415) a. ʔəng^wida dənǰələ??
 ʔng^w=i=da dnǰ-l=a=a?
 who=3DIST=DET sing-ONGOING=a=INVIS
 “Who is singing?”
- b. ✓ cǎyida dənǰələ?
 cǎy=i=da dnǰ-l=a=a?
 younger.sib=3DIST=DET sing-ONGOING=a=INVIS
 “The younger sibling is singing.” (Lit: The singing one is a younger sibling).
- (416) a. wǐgilida cǎya?
 wǐ-gi-l=i=da cǎya
 what-do-ONGOING=3DIST=DET younger.sib
 “What is the younger sibling doing?”
- b. ✗ cǎyida dənǰələ?
 cǎy=i=da dnǰ-l=a=a?
 younger.sib=3DIST=DET sing-ONGOING=a=INVIS
 “The younger sibling is singing.” (Lit: “The singing one is a younger sibling”)
 Speaker comment: “I think cǎya is in the wrong position.”

This phenomenon also appears to hold for noun-adjective examples like those in (417-418). The choice of an adjective over a noun as predicate does not restrict focus interpretation; the

choice of a noun over an adjective as predicate does restrict focus interpretation.

- (417) a. $\acute{m}a\acute{c}a\acute{l}u\check{x}da$ $\acute{c}u\acute{l}tu\check{x}$
 $\acute{m}as\text{-}_h\acute{a}l=u\check{x}=da$ $\acute{c}u\acute{l}\text{-}\acute{?}stu=q$
 what-kind=3MED=DET ash-eye=VIS
 “What is the black thing?”
- b. ✓ $\acute{c}u\acute{l}tuwida$ $\acute{w}a\acute{c}i$
 $\acute{c}u\acute{l}\text{-}\acute{?}stu=i=da$ $\acute{w}as\text{-}_h\acute{i}$
 ash-eye=3DIST=DET dog-NMZ
 “The dog is black.”
- c. ✓ $\acute{w}a\acute{c}iyida$ $\acute{c}u\acute{l}tu$
 $\acute{w}as\text{-}_h\acute{i}=i=da$ $\acute{c}u\acute{l}\text{-}\acute{?}stu$
 dog-NMZ=3DIST=DET ash-eye
 “The black thing is a dog.”
- (418) a. $\acute{w}i\acute{?}stuwu_h\acute{s}$ $\acute{w}a\acute{c}iyu\acute{?}s\acute{?}$
 $\acute{w}i\text{-}\acute{?}stu=u_h\acute{s}$ $\acute{w}as\text{-}_h\acute{i}=u\acute{?}s\acute{?}$
 what-eye=2POSS dog-NMZ=2POSS?
 “What color is your dog?”
- b. ✓ $\acute{c}u\acute{l}tuwida$ $\acute{w}a\acute{c}i$
 $\acute{c}u\acute{l}\text{-}\acute{?}stu=i=da$ $\acute{w}as\text{-}_h\acute{i}$
 ash-eye=3DIST=DET dog-NMZ
 “The dog is black.”
- c. ✗ $\acute{w}a\acute{c}iyida$ $\acute{c}u\acute{l}tu$
 $\acute{w}as\text{-}_h\acute{i}=i=da$ $\acute{c}u\acute{l}\text{-}\acute{?}stu$
 dog-NMZ=3DIST=DET ash-eye
 “The black thing is a dog.”
 Speaker comment: “That’s if someone doesn’t know what the animal is.”

6.5.3 Adjectival predicates

Adjectival predicates are fairly frequent in Kwak’wala, and adjective foci tend to be predicates, as in (419).

(419) *Context: The speaker is describing the difference between two pictures, one of which has a red bird and the other of which has a blue bird.*

a. $\dot{\lambda}ax^w\dot{?}st\acute{w}ida$ $\acute{c}sq^wana$ $h\acute{m}ap$ $\acute{x}a$ $\acute{q}al\acute{a}wi$
 $\dot{\lambda}aq^w-?stw=i=da$ $\acute{c}sq^wana$ $hm-ap$ $\acute{x}a$ $\acute{q}al\acute{a}wi$
red-eye=3DIST=DET bird eat-consume ACC worm
 “The **red** bird is eating the worm.” (Lit: “The bird eating the worm **is-red**.”)

b. $d^za\dot{?}st\acute{w}ida$ $\acute{c}sq^wana$ $h\acute{m}ap$ $\acute{x}a$ $\acute{q}al\acute{a}wi$
 $d^za-?stw=i=da$ $\acute{c}sq^wana$ $hm-ap$ $\acute{x}a$ $\acute{q}al\acute{a}wi$
blue-eye=3DIST=DET bird eat-consume ACC worm
 “The **blue** bird is eating the worm.” (Lit: “The bird eating the worm **is-blue**.”)

However, adjectives in general tend to be predicates, and we have already seen in §6.5.2 that adjectival predicates are not inherently focusing; $\acute{c}ultu\acute{w}ida$ $w\acute{a}ci$ (“The dog is black”) (417-418) was used whether the noun or the adjective was the focus.

I have not encountered, nor managed to construct, equivalent adjective/verb examples to investigate whether adjectival predicates with verbal subjects (more precisely, relative clause subjects with verbal nuclei) are constrained in the same way that nominal predicates with verbal subjects are constrained.

6.5.4 Quantifier predicates

Like adjective predicates¹⁴, sentences with quantifier predicates do not appear to restrict focus interpretation. When a sentence includes a weak quantifier, choosing the quantifier as a predicate seems to be the default choice, in the same way that choosing a verb for the predicate is a default choice.

(420) $\acute{q}\acute{\lambda}i$ $piegilas\acute{w}\acute{\epsilon}?\acute{s}$ $l\acute{a}wan\acute{m}\acute{\epsilon}?\acute{s}$
 $\acute{q}\acute{\lambda}=i$ $pie-gi-la-s\acute{w}=a=a?\acute{s}$ $lax^w-_{w}anm=a=a?\acute{s}$
 six=3DIST pie-do-ONGOING-PASS=POSS=INVIS=3POSS love-person=POSS=INVIS=3POSS
 Heather
 Heather
 Heather
 “Heather’s husband made six pies.”
 (Lit: “Those which were-pie-made by Heather’s husband were six.”)

¹⁴Kwak’wala weak quantifiers appear to be adjectives, syntactically, but I treat them in their own section here.

- (421) qinəmida maχʔinuχ^w duğ^wəł heqalaχ ýəlis
 qinm=i=da maχʔinuχ^w dwq^w-_wł heq-ala=χ ýlis
 many=3DIST=DET orca see-STIM PASS.by-ONGOING=ACC Alert.Bay
 “Many killer whales are seen passing Alert Bay.”
 (Lit: “The whales seen passing Alert Bay are many.”)

(Goodfellow et al., 1991, p. 19) (=1126)

It tends to be the choice for “out-of-the-blue” observations, when such observations include a numeral or other weak quantifier.

- (422) muwuχda biʔbibəg^wanəm ʔəχəla sa λətəmł
 mu=uχ=da b^y-bi-bk^w-_wanm ʔχ-la sa λt-(ğ)m-ł
 four=3MED=DET REDUP-REDUP-man-person do-ONGOING OBL hat-face-wear
 “Four men are wearing hats.” (Lit: “The men with hats are four”)

- (423) qıʔqinəmuχ biʔbusiyaχsux Pat
 q^y-qinm=uχ b^y-busi=aq=s=uχ Pat
 REDUP-many=3MED REDUP-cat=VIS=3POSS=3MED Pat
 “Pat has a lot of cats.” (Lit: “Pat’s cats are many.”)

Sentences with a quantifier predicate can be used in a variety of focus contexts. It can be used when the quantifier is the focus, as in (424-425).

- (424) a. gəns^əpənsx^wasənʔs ʔiʔəχəliʔ
 gns-^əpⁿ-s-x^was=nʔs ʔ^y-ʔχ-l=iʔ
 how.many-ORD-??-span=1INCL REDUP-do-ONGOING=INVIS?
 “How long did we work?”

- b. məʔłpənx^wasənʔs ʔiʔəχəla
 mʔł-^əpⁿ-x^was=nʔs ʔ^y-ʔχ-la
 two-ORD-span=1INCL REDUP-do-ONGOING
 “We worked for two hours.”

- (425) a. gəns^əpəλuʔs wəλacuʔλoʔoʔs gaχən
 gns-^əp^{at}=λ=uʔs wλa-c^w=λ=a=uʔs gaχ=n
 how.many-more=FUT=2POSS ask-PASS=FUT=INVIS=2POSS come=1
 “How many more questions do you have for me?”

- b. məʔɪpətən wəʔacuʔʌooʔs loʔ
 mʔɪ-pət=n wʔa-cw=ʔ==uʔs loʔ
 two-more=1 ask-PASS=FUT=INVIS=2POSS ACC.2
 “I have two more questions for you.”

But quantifier predicates are also used in cases where a different sentential element is in focus:

(426) *Context: We’re playing with wooden toys, and each of us happens to have a different number of them.*

- a. ʔəng^wuǎda səkanuk^weǎ ʔəmləm
 ʔng^w=uǎ=da ṣka-nuk^w=(a)q ʔml-_wm
 who=3MED=DET five-have=VIS play-NMZ
 “Who has five toys?”

- b. səkanuk^wuǎ ʔəmləmǎǎs Pat
 ṣka-nuk^w=uǎ ʔml-_wm=q=s Pat
 five-have=3MED play-NMZ=VIS=3POSS Pat
 “Pat has five toys.” (Lit: “Pat’s toys are five.”)

(427) *Context: The answerer is looking at a card where a dog is guarding two tennis shoes.*

- a. məʔɪoʔuǎ ǎaqaǎsuǎda ẉaciǎ
 mʔɪ=a=uǎ ǎaq=aq=s=uǎ=da ẉas-_hi=q
 two=QUES=3MED bone=VIS=3POSS=3MED=DET dog-NMZ=VIS
 “Does the dog have two bones?”

- b. məʔɪuǎ labasusəsa ẉaci
 mʔɪ=uǎ labasus=ṣa ẉas-_hi
 two=3MED rubber.shoes=3POSS dog-NMZ
 “It has two tennis shoes.”

We can see the same lack of focus restriction when we consider contrastive contexts. In (428) there is a number contrast, while in (429) and (430) there is no number contrast.

(428) *Context: I have shown the consultant two pictures of crabs sitting on dogs, and ask them what the difference is.*

a. **nəmida** q̣umis ḳ^wxλeǎ gada ẉačix
 n̄m=i=da q̣umis ḳ^wa-xλ-ay=ǎ ga=da ẉas-_hi=k
 one=3DIST=DET crab sit-on.head-NMZ=ACC 3PROX=DET dog-NMZ=VIS.3PROX
 “There’s one crab sitting on this dog’s nose.”

b. **məʔhi** gada q̣umisix ḳ^wxλeǎ gada
 mʔh=t=i ga=da q̣umis=ik ḳ^wa-xλ-ay=ǎ ga=da
 two=but=3DIST 3PROX=DET crab=VIS.3PROX sit-on.head-NMZ=ACC 3PROX=DET
 ẉačix
 ẉas-_hi=k
 dog-NMZ=VIS.3PROX
 “But there’s two crabs sitting on this dog’s nose.”

(429) *Context: The same context as before, but with different pictures.*

a. **yəǎgada** ḳatam̄ak^wix, **məʔhi** da q̣umis ḳ^wałp̄eǎ
 yǎ=ga=da ḳata-m̄ak^w=ik, mʔh=i da q̣umis ḳ^w-ał-p̄e=ǎ
 APPOS=3PROX=DET write-face=VIS.3PROX, two=3DIST DET crab sit-ONGOING.POS-on.nose=ACC
 gada ẉačix
 ga=da ẉas-_hi=k
 3PROX=DET dog-NMZ=VIS.3PROX
 “In this picture, there are two crabs sitting on the dog’s nose.”

b. **lati** gada ḳatam̄ak^wix, **məʔhi** da q̣umis
 la=t=i ga=da ḳata-m̄ak^w=ik, mʔh=i da q̣umis
 then=but=3DIST=3PROX DET write-face=VIS.3PROX, two=3DIST DET crab
 ḳ^waxλeǎ gada ẉačix
 ḳ^w-axλe=ǎ ga=da ẉas-_hi=k
 sit-on.head=ACC 3PROX=DET dog-NMZ=VIS.3PROX
 “But in this picture, there are two crabs sitting on the dog’s head.”

Context: Two landscape pictures were presented to the speaker; in one, there is a small stand of three trees, but in other there are three stumps in the same position and arrangement.

- (430) a. yudəx^wida λι?λο?s
 yudx^w=i=da λý-λαǰ^w-_hs
 three=3DIST=DET REDUP-tree-on.ground
 [In the first picture,] “There are three trees.” (Lit: “The trees are three.”)
- b. yudəx^wida huḗidaǰamala
 yudx^w=i=da huḗidaǰamala
 three=3DIST=DET stump
 [In the second picture,] “There are three stumps.” (Lit: “The stumps are three.”)

It is interesting to compare this to English, where quantifiers are not the first choice for predicate; indeed, they are not a very good choice for predicate at all. Insofar as I do have intuitions about such awkward sentences as “My children are three” or “The problems with this analysis are many”, they seem to be restricted to situations in which the quantifier serves as the focus.¹⁵

- (431) a. “How many flying birds are there?” “The flying birds are three.”
 b. “What are the three birds doing? #“The flying birds are three.”

The quantifier-predicate answer in (431a), although it sounds archaic, at least sounds like it is answering the question, whereas the answer in (431b) does not sound like a possible answer at all.

6.5.5 DP predicates

DPs cannot be predicates directly in Kwak’wala; they need a copular element such as *yu-* or *he-* (§4.2-§4.3) to serve as a sentential predicate.

- (432) a. ʔəng^wida dag^wedaλe??
 ʔng^w=i=da dag^weda=λ=a=a??
 who=3DIST=DET doctor=FUT=a=INVIS
 “Who’s going to be a doctor?” (Lit: “The one who will be a doctor is-who?”)
- b. yuλuǰ Pat dag^wedaλ
 yu=λ=uǰ Pat dag^weda=λ
 be.3MED=FUT=3MED Pat doctor=FUT
 “It’s Pat who will be a doctor.”

¹⁵This same pattern obtains for the non-awkward English translations of these, using “there”-insertion. “There are three flying birds” serves as an answer to (431a) but not (431b).

As seen in §4.3, clefts like (432b) restrict focus interpretation in a similar way to nominal predicates, and I interpret them as DP predicate constructions.¹⁶ However, like a nominal predicate, a DP predicate is not inherently focusing. Whether a DP predicate constrains focus interpretation depends on the type of the sentence (cleft or canonical), and the type of the sentence depends on the types of DPs involved.

For example, if we take a canonical equative copular sentence (§4.2) with a proper name subject (like “Sean”) and a relational DP (like “my son”) as copular complement, either of these can be the focus.

- (433) a. ʔəng^wəs x^wənuk^weʔʔ
 ʔng^w=s x^wnuk^w=a=aʔ
 who=2 child=a=INVIS
 “Who’s your son?”
- b. ✓ heḿən ǰ^wənuk^wi Sean
 he=ʔm=n ǰ^wnuk^w=i Sean
 be.3DIST=VER=1POSS child=3DIST Sean
 “Sean is my son.”

- (434) a. λιλιλαλολαḗase λəwi Sean?
 λι-λιλαλολα-ḗa=s=i λw=i Sean
 REDUP-RELATIVES-RECIP=2=QUES and=3DIST Sean
 “Are you related to Sean?”
- b. ✓ heḿən ǰ^wənuk^wi Sean
 he=ʔm=n ǰ^wnuk^w=i Sean
 be.3DIST=VER=1POSS child=3DIST Sean
 “Sean is **my** son.”

On the other hand, if we take a “cleft” copular sentence (§4.3) in which the clefted constituent (what I take to be the predicate in §4.3.3) is the proper name (“Mervin”) and the remnant (which I do not necessarily take to be the subject itself, but at least coreferential with it) is the relational DP (“Sara’s brother”), then we see that only the proper name can be the focus.

¹⁶More precisely, the predicate in the cleft analysis in §4.3 is not a DP, but the projection headed by the equative copula, of which the DP itself is the specifier.

- (435) a. ʔəŋg^wi wəq̣^wεʔs Sara
 ʔŋg^w=i wq̣^w=a=a=s Sara
 who=3_{DIST} brother=a=INVIS=3_{POSS} Sara
 “Who is Sara’s brother?”
- b. ✓ hēmi Mervin wəq̣^was Sara
 he=ʔm=i Mervin wq̣^wa=s Sara
 be.3_{DIST}=VER=3_{DIST} Mervin brother=3_{POSS} Sara
 “Mervin is Sara’s brother.” (Lit: “It’s Mervin who is Sara’s brother.”)

- (436) a. ʔəŋg^wi Mervin?
 ʔŋg^w=i Mervin?
 who=3_{DIST} Mervin
 “Who is Mervin?”
- b. ✗ hēmi Mervin wəq̣^was Sara
 he=ʔm=i Mervin wq̣^wa=s Sara
 be.3_{DIST}=VER=3_{DIST} Mervin brother=3_{POSS} Sara
 “Mervin is Sara’s brother.” (Lit: “It’s Mervin who is Sara’s brother.”)

This is the same focus pattern we see in §6.5.2 – the “cleft” order constrains focus interpretation in a way that the “canonical” order does not.

However, it should be emphasized that it is not just the type of the predicate (e.g., whether it is a proper name) that determines whether the equative sentence is canonical or cleft, and determines the possible focus interpretations. It depends on what else is in the sentence, just as the focus interpretation of NP predicates depended on what else is in the sentence. Proper names can be the predicates of canonical sentences as well, for example when the subject is an ostensive DP – the equivalent of “that boy” in (437b) – or even an ostensive *pro* – the equivalent of “that” in (438b).

- (437) a. ʔəŋg^wida gənanəm?
 ʔŋg^w=i=da gn-_wanm
 who=3_{DIST}=DET young-person
 “Who is that small boy?”
- (Powell et al., 1981b, p. 12)

predicate from lower down on the hierarchy (like choosing an nominal predicate over a potential verbal predicate) constrains focus interpretation, whereas choosing a predicate from higher on the hierarchy (like choosing a nominal predicate over a proper name) does not constrain focus interpretation.

(439) { VP, AP, QP } > NP > DP

Moreover, within the DP category there are gradations: at least relational DP > proper name, and possibly relational DP > proper name > ostensive DP.

6.5.7 Inversion and focus asymmetry in English

This asymmetry, in a different form, is familiar from English. Although English does not allow the same kind of predicative freedom that Kwak’wala does, it does allow this kind of freedom in copular sentences. Many authors (e.g. Higgins, 1973; Mikkelsen, 2005; den Dikken, 2006) have emphasized the information structural differences between English copular sentences: “inverse” or “specificational” copular sentences have focus restrictions that canonical copular sentences lack.

- (440) a. “Who is your wife?” “Mary is my wife.”
 b. “Who is your wife?” “My wife is Mary.”
 c. “What is your relationship to Mary?” “Mary is my wife.”
 d. “What is your relationship to Mary?” #“My wife is Mary.”

- (441) a. “Who was the driver?” “Mary was the driver.”
 b. “Who was the driver?” “The driver was Mary.”
 c. “What did Mary do?” “Mary was the driver.”
 d. “What did Mary do?” #“The driver was Mary.”

- (442) a. “Who was the driver?” “My wife was the driver.”
 b. “Who was the driver?” “The driver was my wife.”
 c. “What did your wife do?” “My wife was the driver.”
 d. “What did your wife do?” #“The driver was my wife.”

Inversions of copular sentences with indefinite copular complements are usually ungrammatical (443), but they are somewhat rescued by “Give me an example of...” contexts (“An example of *X* is *Y*.”), as in (444).

- (443) a. “You are the winner.”
 b. “The winner is you!”
 c. “You are a winner.”
 d. *“A winner is you!”
- (444) a. “‘What’s a good example of a fairy tale with a gruesome ending?’ ‘A good example of a fairy tale with a gruesome ending is *The Kobold and the Chambermaid*.’”
 b. “‘What was a memorable song from a forgettable band?’ ‘A memorable song from a forgettable band was *Come on Eileen*.’”

Indefinite-CC copular sentences likewise show focus asymmetry. Even if (445b) or (446b) is slightly awkward, they are strikingly better than (445d) or (446d).

- (445) a. “‘What’s a good example of a fairy tale with a gruesome ending?’ ‘*The Kobold and the Chambermaid* is a good example of a fairy tale with a gruesome ending.’”
 b. “‘What’s a good example of a fairy tale with a gruesome ending?’ ‘A good example of a fairy tale with a gruesome ending is *The Kobold and the Chambermaid*.’”
 c. “‘What was *The Kobold and the Chambermaid*?’ ‘*The Kobold and the Chambermaid* is a good example of a fairy tale with a gruesome ending.’”
 d. “‘What was *The Kobold and the Chambermaid*?’ #“A good example of a fairy tale with a gruesome ending is *The Kobold and the Chambermaid*.’”
- (446) a. “‘What was a memorable song from a forgettable band?’ ‘*Come on Eileen* was a memorable song from a forgettable band.’”
 b. “‘What was a memorable song from a forgettable band?’ ‘A memorable song from a forgettable band was *Come on Eileen*.’”
 c. “‘What was *Come on Eileen*?’ ‘*Come on Eileen* was a memorable song from a forgettable band.’”
 d. “‘What was *Come on Eileen*?’ #“A memorable song from a forgettable band was *Come on Eileen*.’”

We can even see this pattern in pseudoclefts:

- (447) a. “‘What does Rachel hate most?’ ‘Chocolate is what she hates most.’”
 b. “‘What does Rachel hate most?’ ‘What she hates most is chocolate.’”
 c. “‘How does Rachel feel about chocolate?’ ‘Chocolate is what she hates most.’”
 d. “‘How does Rachel feel about chocolate?’ ??“What Rachel hates most is chocolate.’”

- (448) a. “What did Jason steal from Colchis?” “The golden fleece was what Jason stole from Colchis.”
- b. “What did Jason steal from Colchis?” “What Jason stole from Colchis was the golden fleece.”
- c. “What was the golden fleece?” “The golden fleece was what Jason stole from Colchis.”
- d. “What was the golden fleece?” #“What Jason stole from Colchis was the golden fleece.”

We can observe in English copular sentences a hierarchy within the various types of DPs, something along the lines of: indefinites > definite descriptions > relational nouns > proper names. In the next section, I will suggest that choosing a subject/predicate in accordance with this hierarchy results in a sentence with an unrestricted focus interpretation (aside from whatever restriction focus intonation adds, of course); choosing a subject/predicate in violation of this hierarchy results in a sentence with a restricted focus interpretation.

6.5.8 Focus and the predication hierarchy

That both Kwak’wala and English show such hierarchies, albeit possibly in different forms due to their differing predicative possibilities, suggests that focus restriction may lie in these hierarchies, rather than in construction-specific properties of the Kwak’wala cleft or NPC, or the English cleft, inverse copular sentence, or pseudocleft.

Moreover, the Kwak’wala NPC data suggests that even if English inverse copular sentences are created by a syntactic “inversion” along the lines of Heggie (1988), Heycock (1994), Moro (1997), or den Dikken (2006), it is not this inversion itself that results in the restricted focus interpretation. The Kwak’wala pairs in §6.5.2 are not inversions of this sort, in the sense of resulting from different constituents raising out of a uniform base sentence, but we nonetheless see the same focus restrictions in the Kwak’wala NPCs as in the English copular sentences that translate them.

The surprising judgment that a speaker volunteered regarding participial predicates in §3.5 illustrates this further. When I attempted to construct a sentence with a participial predicate – that is, a predicate “passivized” with *-kʷ* rather than the regular passive *-sʷ* – the speaker felt that this sentence was very strange, then upon further consideration explained that this sentence would only respond to a situation when someone was concerned with what happened to the wood (whether it was chopped, split, sawed, etc.).

- Principle B: Foci make better predicates than non-foci.¹⁹

If we assume that speakers have to satisfy *at least* one of these principles, this could explain why default predicate choices do not constrain focus interpretation, and why non-default predicate choices do constrain focus interpretation. When Principle A is satisfied (when the allosentence with the best available predicate is chosen among possible allosentences), then the listener cannot conclude whether or not Principle B is satisfied. On the other hand, when Principle A is *not* satisfied, then the listener can conclude that Principle B must be satisfied, and therefore that the predicate is a focus.

To illustrate, if we consider sentences like those in (450), each of these satisfies Principle A. (450a) has a verbal predicate, and so will satisfy Principle A regardless; (450b) has a nominal predicate, but no better predicate is available. Since Principle A is satisfied, nothing can be concluded about Principle B, and therefore we cannot narrow down the focus interpretation of these sentences.

- (450) a. ʔəχʔεχsdən ʃa w̄ap
 ʔχ-ʔεχsd=n ʃa w̄ap
 do-want=1 ACC water
 “I want water.”
- b. dag^wədaλuχ Pat
 dag^wda=λ=uχ Pat
 doctor=FUT=3MED Pat
 “Pat will be a doctor”

On the other hand, the sentences in (451) do not satisfy Principle A. (451a) has a nominal predicate, where a verbal predicate would have been a possible choice, while (451a) has a nominal predicate, where an adjectival predicate would have been a possible choice.

- (451) a. w̄apən ʔəχʔεχsdəsəw̄εʔ
 w̄ap=n ʔχ-ʔεχsd-sw̄=εʔ
 water=1 do-want-PASS=INVIS
 “I want water” (Lit: “The one I want is water.”)

¹⁹To be precise, the predicate itself need not be an F-variable in the sense of Chapter 5; it may just contain an F-variable. So more broadly, we might say that predicates with nontrivial F-closures make better predicates than ones with trivial F-closures.

- b. wáciyida ćuľtu
 wás-_hi=i=da ćuľ-?stu
 dog-NMZ=3DIST=DET ash-eye
 “The dog is black.” (Lit: ”The black thing is a dog.”)

Since the speaker has to satisfy at least one principle, the listener can deduce that Principle B is satisfied, and therefore that *wá*p and *wáci* are foci.

6.5.9 Formal illustration

To illustrate this in more formal detail, using the congruence model proposed in Chapter 5, let us consider first the questions in (452a-452b).

- (452) a. mǎcali?ś ?ǎǎ?eǎsdəsəwə?o?ś
 mǎcal=i?=ś ?ǎ-?eǎsd-sw=a=u?ś
 what=3DIST=2POSS do-want-PASS=INVIS=2POSS
 “What do you want?” (=383a)

- b. ?əng^wida ?ǎǎ?eǎsdε? ǎa wǎp
 ?ng^w=i=da ?ǎ-?eǎsd=ε? ǎa wǎp
 who=3DIST=DET do-want=INVIS ACC water
 “Who wants water?” (=384a)

The SAY operator in the questions (452a-452b) binds the WH-element, resulting in (453a) and (453b) respectively.

- (453) a. SAY¹(mǎcal₁ =i?ś ?ǎǎ?eǎsdəsəwə?o?ś)
 b. SAY¹(?əng^w₁ =ida ?ǎǎ?eǎsdε? ǎa wǎp)

The O-closures of these sentences are those in (454a) and (454b), respectively.

- (454) a. {λw.that I want x in w | x ∈ D_e}
 b. {λw.that x wants water in w | x ∈ D_e}

The SAY operators assert that there exist considerations in *C* that are subsets of these O-closures. Assuming an initially empty *C*, this constrains the resulting *C*’s to sets like those in (455a) and (455b), respectively.

$$(455) \text{ a. } C = \left\{ \left\{ \begin{array}{l} \lambda w.that \ I \ want \ water \ in \ w \\ \lambda w.that \ I \ want \ tea \ in \ w \\ \lambda w.that \ I \ want \ coffee \ in \ w \\ \dots \end{array} \right\} \right\}$$

$$\text{ b. } C = \left\{ \left\{ \begin{array}{l} \lambda w.that \ I \ want \ water \ in \ w \\ \lambda w.that \ Hannah \ wants \ water \ in \ w \\ \lambda w.that \ Ayako \ wants \ water \ in \ w \\ \dots \end{array} \right\} \right\}$$

So, after the expression of the question in (452a), the state of C would be something like that in (455a), whereas after the expression of the question in (452b), the state of C would be something like that in (455b).

Now let us consider the answer in (456).

$$(456) \begin{array}{l} \text{?}\acute{\text{a}}\text{?}\acute{\text{e}}\acute{\text{x}}\text{s}\acute{\text{d}}\text{=}\acute{\text{n}} \acute{\text{x}}\acute{\text{a}} \acute{\text{w}}\acute{\text{a}}\text{p} \\ \text{?}\acute{\text{x}}\text{-?}\acute{\text{e}}\acute{\text{x}}\text{s}\acute{\text{d}}\text{=}\acute{\text{n}} \acute{\text{x}}\acute{\text{a}} \acute{\text{w}}\acute{\text{a}}\text{p} \\ \text{do-want=1} \quad \text{ACC} \quad \text{water} \\ \text{“I want water.”} \end{array} \quad (=456)$$

As noted in the previous section, this sentence fulfills Principle A; therefore Principle B might or might not be fulfilled; therefore the structure of this sentence does not tell us anything about the location of the focus variable. Among the various possibilities are the two in (457a) (in which $\acute{\text{w}}\acute{\text{a}}\text{p}$, “water”, is the F-variable) and (457b) (in which $\text{=}\acute{\text{a}}\text{n}$, “I”, is the F-variable).

$$(457) \text{ a. } \text{SAY}_1(\text{?}\acute{\text{a}}\text{?}\acute{\text{e}}\acute{\text{x}}\text{s}\acute{\text{d}}\text{=}\acute{\text{a}}\text{n} \acute{\text{x}}\acute{\text{a}} \acute{\text{w}}\acute{\text{a}}\text{p}_{F_1})$$

$$\text{ b. } \text{SAY}_1(\text{?}\acute{\text{a}}\text{?}\acute{\text{e}}\acute{\text{x}}\text{s}\acute{\text{d}}\text{=}\acute{\text{a}}\text{n}_{F_1} \acute{\text{x}}\acute{\text{a}} \acute{\text{w}}\acute{\text{a}}\text{p})$$

The F-closures of (457a) and (457b) are

$$(458) \text{ a. } \{ \lambda w.that \ I \ want \ x \ in \ w \mid x \in D_e \}$$

$$\text{ b. } \{ \lambda w.that \ x \ wants \ water \ in \ w \mid x \in D_e \}$$

The SAY operator in (457a) meta-presupposes that every consideration in C is of the form in (458a). This true of the C in (455a), so (457a) is congruent to the question in (452a) ($\acute{\text{m}}\acute{\text{a}}\acute{\text{c}}\acute{\text{a}}\text{t}\acute{\text{i}}\text{?}\text{s} \text{?}\acute{\text{a}}\text{?}\acute{\text{e}}\acute{\text{x}}\text{s}\acute{\text{d}}\text{=}\acute{\text{a}}\text{s}\acute{\text{w}}\acute{\text{a}}\text{?}\text{o}\text{?}\text{s}$, “What do you want?”).

Meanwhile, the SAY operator in (457b) meta-presupposes that every consideration in C is of the form in (458b). This is true of the C in (455b), so (457b) is congruent to the question in (452b) ($\text{?}\acute{\text{a}}\text{n}\text{g}^{\text{w}}\text{i}\text{d}\text{a} \text{?}\acute{\text{a}}\text{?}\acute{\text{e}}\acute{\text{x}}\text{s}\acute{\text{d}}\text{e?} \acute{\text{x}}\acute{\text{a}} \acute{\text{w}}\acute{\text{a}}\text{p}$, “Who wants water?”).

That is to say, there exists a possible focus interpretation of (456) that is compatible with both questions (452a) and (452b), so it can serve as a congruent answer to either.

On the other hand, consider the nominal-predicate sentence in (459).

- (459) $\acute{w}ap\acute{e}n \quad \text{?}\acute{a}\acute{x}\text{?}\acute{e}\acute{x}\acute{s}d\acute{a}s\acute{a}\acute{w}\acute{e}\text{?}$
 $\acute{w}ap=\acute{n} \quad \text{?}\acute{x}\text{-?}\acute{e}\acute{x}\acute{s}d\text{-s}\acute{w}=\acute{\epsilon}\text{?}$
 water=1 do-want-PASS=INVIS
 “I want water” (Lit: “The one I want is water.”) (=451a)

As noted in the previous section, this sentence does not fulfill Principle A; $\text{?}\acute{a}\acute{x}\text{?}\acute{e}\acute{x}\acute{s}d$ (“want”) would have been a better predicate than $\acute{w}ap$ (“water”). Since at least one principle must be fulfilled, Principle B must be fulfilled, and the only interpretation of (459) that fulfills Principle B is the one where $\acute{w}ap$ is an F-variable.

- (460) $SAY_1(\acute{w}ap_{F_1} = \acute{e}n \text{?}\acute{a}\acute{x}\text{?}\acute{e}\acute{x}\acute{s}d\acute{a}s\acute{a}\acute{w}\acute{e}\text{?})$

The binding in (460) results in the F-closure in (461)

- (461) $\{\lambda w.that\ I\ want\ x\ in\ w\ | \ x \in D_e\}$

The SAY in (460) meta-presupposes that every consideration in C is of the form in (461). This is true of the C in (455a) (corresponding to the question $\acute{m}\acute{a}\acute{c}\acute{a}l\acute{i}\text{?}s \text{?}\acute{a}\acute{x}\text{?}\acute{e}\acute{x}\acute{s}d\acute{a}s\acute{a}\acute{w}\acute{a}\text{?}o\text{?}s$, “What do you want?”). This is not, however, true of the C in (455b) (corresponding to the question $\text{?}\acute{a}ng^{w}ida \text{?}\acute{a}\acute{x}\text{?}\acute{e}\acute{x}\acute{s}d\acute{e}\text{?} \acute{x}a \acute{w}ap$, “Who wants water?”).

That is to say, there exists a possible focus interpretation of (459) that is compatible with the question in (452a), but not compatible with the question in (452b). So, unlike the neutral answer in (456), which can correspond to either question, the nominal-predicate answer in (459) is restricted with respect to the contexts in which it can occur.

6.6 Summary

Focus in Kwak’wala is primarily expressed by two structures, the nominal predicate construction (NPC) and the “cleft”, a variety of equative sentence in which the subject appears immediately after the copula rather than finally.

While one occasionally encounters English-like prosodic emphasis, this does not correspond systematically with discourse context, and I suspect that much of it is metalinguistic. Some of the other consequences of English-style prosodic focus are missing as well, like the restriction against having enclitic pronouns be foci, or null pronouns being foci; both of these are possible in Kwak’wala.

Koch (2008) proposes that NPCs and clefts serve a fundamentally prosodic purpose: that all languages have a constraint that foci need to be aligned to particular edges (left or right) of intonational phrases, and left-edge focus constructions like NPCs and clefts are a means to achieve this alignment even in languages that cannot manipulate prosody for this purpose. However, various aspects of Kwak’wala make this conclusion untenable as an explanation of Kwak’wala NPCs and clefts. There are many constituents that we can show must be foci – the associates of focus operators, for example – that do not appear, and do not tend to appear, at the left periphery, even when such appearance would be entirely syntactically possible. In any case, the relative rarity of Kwak’wala focus constructions compared to Nl̓eʔkepmxcín focus constructions would make an Optimality Theoretic alignment account (or indeed, any kind of alignment requirement) undesirable; any alignment would be quite regularly violated for no apparent reason.

Rather, I take the other style of account: that predicate-initial languages have left-aligning focus constructions because these foci are predicates. That is, while not all predicates are foci and not all foci are predicates, predicates have to be interpreted as foci under certain conditions. There is a scale of potential predicates, with verbs as the “best” predicates and certain kinds of DPs as the “worst”, and when a worse predicate is chosen when a better predicate was available, this restricts potential focus interpretations to ones in which the predicate is focused. We can express this choice as a maxim: “Choose the ‘best’ predicate to be the predicate, or choose the focus to be the predicate”; when the speaker could have chosen a better candidate for a predicate, the listener can deduce that they chose the focus as predicate.

Chapter 7

Focus operators

7.1 Introduction

Kwak’wala has a variety of focus operators (that is, operators along the lines of “only”, “also”, and “even”) with a number of interesting properties. They are a morphologically heterogeneous collection: some are second-position enclitics, some are predicates or auxiliaries, and one is a variety of copula. Each of them consists of multiple morphemes – at minimum, $=\text{?}m$ and another morpheme – while some have additional morphemes beyond this, like the equivalents of “always” and “still”, illustrating component meanings that are not directly represented in English.

As I noted in §5.6, these are not necessarily “focus-sensitive operators” the way this term is used for English. There is not necessarily an independently observable phenomenon (like focus accentuation) such that variations in this phenomenon condition variations in the interpretation of these operators. It would therefore be difficult to determine along similar lines what phenomena in Kwak’wala count as “focus-sensitive”, the way we can observe that an extensive catalogue of words and phenomena in English are focus-sensitive in some way (cf. Kadmon, 2001; Beaver and Clark, 2008).

Nonetheless, with the success of alternative-style semantic accounts of focus in capturing many different focus-sensitive phenomena, we can still identify a class of operators with a semantic commonality: that it is necessary to take into account focus semantic values in order to calculate their contribution to a sentence. Kwak’wala would almost certainly have many phenomena that utilize focus semantic values – presumably, many of the same phenomena that are focus-sensitive in English – but in these chapters I will concentrate on the “classic” focus operators, those in König’s (1991) three classes of exclusive (“only”), additive (“also”), and scalar (“even”) operators.

7.2 Additive operators

An **additive** operator, like English “too”, or “also”, presupposes that some other alternative to the sentence is true, as well. That is, the use of an additive sentence like (462) is restricted to contexts in which some other alternative, of the form “Peter visited [somewhere]”, is true.

(462) “Peter visited the EXHIBITION, too”

Kwak’wala additive focus is expressed by a 2nd-position enclitic =*ǰa* (463a) or the auxiliary *ǰug^waq-* (from a stem meaning “different” or “another”) (463b), or both (463c). Both of these always co-occur with =*ǰm*, the presence of which is discussed in §8.7.2.

- (463) a. *ǰəǰəlaǰəmǰəǰəǰə^w* *Paǰe sa ǰətəmǰ*
ǰǰ-la=ǰm=ǰa=uǰ *Paǰe sa ǰt-(ǰ)m-ǰ*
 do-ONGOING=VER=ADD.FOC=3MED Pat OBL hat-face-wear
 [Masaki’s wearing a hat and...] “Pat is **also** wearing a hat.”
- b. *ǰug^waqam^uǰ* Pat *həm^xǰida ǰa musmus*
ǰug^waq=ǰm=uǰ Pat *hm^x-ǰida ǰa musmus*
also=VER=3MED Pat eat-CHANGE ACC COW
 [Masaki ate a cow and...] “Pat **also** ate a cow.”
- c. *ǰug^waqəǰəmǰəǰəǰə^w* Pat *loǰ ǰa ǰibayu*
ǰug^waq=ǰm=ǰa=uǰ Pat *la-w-ǰ ǰa ǰip_wayu*
also=VER=ADD.FOC=3MED Pat go-out-obtain ACC step-INSTR
 [Catherine caught a shoe while fishing and...] “Pat **also** got a shoe.”

7.2.1 *ǰa*

The additive enclitic /=*ǰa*/ occurs within the second-position enclitic sequence after the initial predicate or auxiliary. It follows the tense enclitic and precedes the enclitic =*ǰ(a)* “but”.

(464)	Slot:	verum	tense	additivity	contrast (?)
	Example:	<i>ǰm</i>	<i>ǰ</i>	<i>ǰa</i>	<i>ǰ</i>

The /a/ vowel in /*ǰa*/ rarely surfaces as [a], since it is so often followed by a person enclitic and therefore surfaces as a schwa or echo vowel (§A.5.3).¹

¹Indeed, some speakers seem to take this to be a rule, and consider sentences like (810b), in which a subject enclitic does not follow *ǰa*, to be strange.

- (468) we, ʔoʔəmlawisi ʔug^waqɑ ǵalʔəlsi
 we, ʔwa=ʔm=lá=wis=i ʔug^waqɑ ǵal-ʔəl-_hs=i
 well, SO=VER=REPORT=AND.SO=3DIST **also** hit?-move.to-on.ground=3DIST
 xəndʒasas.
 xəns-_was=a=s.
 nose-NMZ=POSS=3POSS
 “Well, his beak **also** only struck the ground.” (Boas and Hunt, 1905, p. 297)

The stem ʔug^waq- in general means something like “be different, be another”; in the following sentences, it is used as a predicate (469) and as an attributive modifier (470).

- (469) a. ʔug^waqɑʔəms ləǵeʔ
 ʔug^waqɑ=ʔm=s lǵ-aǵ
 different=VER=2POSS basket-NMZ
 “Your basket is **different**.”
- b. ʔiʔug^waǵ ʔstuwi ǵəyaǵəsəs
 ʔý-ʔug^waq-ʔstu=i ǵyaǵs=s
 REDUP-**different**-eye=3DIST eye=3POSS
 “Her eyes are **different** colors,” or “Her eyes are hazel.”
- c. ʔug^waqalaga liʔloʔsix
 ʔug^waq-ała=ga lý-łaǵ^w-_hs=ik
 different-ONGOING=3PROX REDUP-stand-on.ground=VIS.3PROX
 laǵga nəmX
 l=(a)ǵ=ga nm=k
 PREP=ACC=3PROX one=VIS.3PROX
 The trees are **different** from those.

- (470) ǵinəmidɑ ʔiʔug^waq-ała giʔguk^w
 ǵinm=i=da ʔý-ʔug^waq-ała ǵý-guk^w
 many=3DIST=DET REDUP-**different**-ONGOING REDUP-house
 “There are many **different** houses.”

In its auxiliary use as “also”, however, it does not necessarily describe any particular entity as being different. That is, in the sentences above, the use of ʔug^waq- as a sentential predicate describes the subject as being different from something else, but the auxiliary use in (471), does

not describe the subject (=u^ǰ Pate^ǰ) as being different.³

- (471) ɖug^waqəɖəm^ǰoɖo^ǰ^w Pate^ǰ ɖə^ǰəla sa λətəml
 ɖug^waq=ɖm=ǰa=u^ǰ Pate=q ɖ^ǰ-la sa λt-(ǰ)m-l
also=VER=ADD.FOC=3MED Pat=VIS do-ONGOING OBL hat-face-wear
 [Masaki is wearing a hat and...] “Pat is **also** wearing a hat.”

Meanwhile, we should observe that instances of non-auxiliary ɖug^waq- are not necessarily additive. The sentence in (472) does not seem to mean that, for example, she had already chosen something else, or someone else had chosen the door; it just means that she had a choice between doors, and chose the other one.

- (472) *Context: We are discussing the game show “Let’s Make a Deal”, where the host offers the contestant a choice between doors. Opening one of the doors would have won the contestant a car.*

- heda ɖə^ǰɖicuɖsəɖeda ɖug^waqala təxəla,
 he=da ɖ^ǰ-xɖid-s^ws=a=i=da ɖug^waq-a-la txla,
 be.3DIST=DET do-CHANGE-PASS=QUES=3DIST=DET **different**-ONGOING door
 “It was the other door that she chose.”

7.2.3 Association of additives

The additive operators are able to associate with any focus in the sentence. The focus could be the subject (473a, 474a), the object (473b, 474b), the predicate (473c, 474c), or another argument (473d).

³Nor does it mean “Pat is wearing a different hat.” While we could perhaps argue that it does for (471), because obviously Pat and Masaki are not wearing the selfsame hat, this analysis would be hard to maintain for something like the negative sentence in (484b), which would have to mean “[Ayako doesn’t eat any meat] and Hannah does not eat a different meat”, which is an absurd interpretation.

- (473) a. $kəlx^w a ?əm x ə ?e$ **Joe** $ǰa$ $pəlawas$ $qə ?e$
 $klx^w a = ?m = ǰa = i$ **Joe** $ǰa$ $plawas$ $qa = i$
buy=VER=ADD.FOC=3DIST **Joe** ACC flower for=3DIST
[I bought my mother some flowers and...] “**Joe** bought her flowers, too.”
- b. $kəlx^w a ?əm x ə ?ən$ $ǰa$ **?ixpə ?oma** $qə ?e$
 $klx^w a = ?m = ǰa = n$ $ǰa$ **?ik-p- ?uma** $qa = i$
buy=VER=ADD.FOC=1 ACC good-taste-thing for=3DIST
[I bought Sarah some flowers and...] “I also bought her **candy**.⁴”
- c. **?ixpə ?oma ?əm x ə ?ən** $kilx^w anəm$ $qə ?e$
?ik-p- ?uma = ?m = ǰa = n $kilw- w anm$ $qa = i$
good-taste-thing=VER=ADD.FOC=1 buy-obtained for=3DIST
[I bought Sarah some flowers and...] “I also bought her **candy**.”
- d. $kəlx^w a ?əm x ə ?ən$ $ǰa$ $pəlawas$ $qə ?ən$ **?əbəmp**
 $klx^w a = ?m = ǰa = n$ $ǰa$ $plawas$ $qa = n$ **?b-mp**
buy=VER=ADD.FOC=1 ACC flower for=1POSS **mother**
[I bought Sarah some flowers and...] “I also bought flowers for **my mother**.”

(474) *Context: Several of us went sport fishing.*

- a. $lo ǰəm x ə ?u ǰ$ $?ug^w aqu ǰ$ **Catherinə ǰ** $ǰa$ $tibayu$
 $la- w- ǰ = ?m = ǰa = u ǰ$ $?ug^w aq = u ǰ$ **Catherine = q** $ǰa$ $tip- w ayu$
go-out-obtain=VER=ADD.FOC=3MED also=3MED **Catherine**=VIS ACC step-INSTR
[Pat caught a shoe and...] “**Catherine** got a shoe, too.”
- b. $lo ǰəm x ə ?o ǰ x^w$ Masaki $ǰa$ **dʒax^wən**
 $la- w- ǰ = ?m = ǰa = u ǰ$ Masaki $ǰa$ **dʒax^w n**
go-out-obtain=VER=ADD.FOC=3MED Masaki ACC **eulachon**
[Masaki caught a salmon and..] “Masaki got an **eulachon**, too.”
- c. **tibayu ?əm x ə ?e** $lo ǰan ə m ə ?s$
tip- w ayu = ?m = ǰa = i $la- w- ǰ- w anm = ? = s$
step-INSTR=VER=ADD.FOC=3DIST go-out-obtain-obtained=INVIS=3POSS
[Hannah caught a spring salmon and...] “She also got a **shoe**.”

It should be noted that this “free” association pattern is not just because = $ǰa$ is an enclitic, whereas exclusive operators (*hig-*, *ǰo-*, and *ǰal-*, cf. §7.3), which have more fixed association

patterns, are stems. *ʔug^waq-* is a stem, and seems to have the same or similar auxiliary syntax as *ʔo* (§7.3.4.2), but shows the same free association as =*ǰa*.

(475) *Context: We are sorting out who is intending to give what to whom, for Christmas this year.*

ʔug^waqəʔəmǰǰəʔe Pat ɔoɭ sa waci laǰ Lisa

ʔug^waq=ʔm=ǰ=ǰa=i Pat ɔo=ǰ sa was_{-h}i la=ǰ Lisa

also=VER=FUT=ADD.FOC=3DIST Pat give=FUT OBL dog-NMZ PREP=ACC Lisa

[Having already given Jon a dog...] “Pat will also give a dog to **Lisa**.”

[Having already given her a cat...] “Pat will also give a **dog** to Lisa.”

[Henry already having given her a dog...] “**Pat** will also give a dog to Lisa.”

ʔug^waqəʔəm and *ʔm=ǰəʔ* are not usually used for actions in sequence (“did *X* and then did *Y*”); for this the “narrative” *la=ʔm* is used (§8.8). It can, however, be used for actions, as seen in (476b).

(476) a. **d^rəma**mənʔsaǰa ǰətəm laǰa k^wuʔsi laǰa məq^waci.

d^rma=ʔm=nʔs=(a)ǰa ǰtm laǰa k^ws-i laǰa məq^wci.

bury=VER=1INCL=ACC carrot and potato=NMZ and onion

“We **plant** carrots and potatoes and onions.”

b. **kəlx^wa**ʔəmǰǰəʔənʔsaǰ laǰa kəlwilas.

kəlx^wa=ʔm=ǰa=nʔs=(a)ǰ l=(a)ǰa kəlx^w-_wil_{-w}as.

buy=VER=ADD.FOC=1INCL=ACC PREP=ACC buy-indoors-PLACE

“We also **buy** them at the store.”

7.2.4 Additive sentences with marked foci

In their “free” association behavior, the Kwak’wala additive operators resemble the Nlẽʔkep-mxcín additive operator *ʔelǰuʔ* (Koch and Zimmermann, 2010). However, Koch and Zimmermann also note that when an element is focused by a nominal predicate construction, then *ʔelǰuʔ* must associate with it. Kwak’wala nominal predicates likewise constrain the interpretation of the additive.

First, we can observe that, for an ordinary verbal predicate sentence like those in (477), the additive can associate with any of the arguments.

(477) *Context: We’re discussing people’s Christmas gift requests, and I note that both Hannah and Ayako have requested dogs.*

- a. ✓ ʔəʃʔεχsdaʔəmχeʔe ǰa wáci
 ʔǰ-ʔεχsda=ʔm=ǰa=i ǰa wAs-HI
 do-want=ver=ADD.FOC=3PROX ACC **dog-NMZ**
 [Hannah wants a horse and] “she also wants a **dog_F**.”
- b. ✓ ʔəʃʔεχsdaʔəmχeʔe **Ayako** ǰa wáci
 ʔǰ-ʔεχsda=ʔm=ǰa=i **Ayako** ǰa wAs-HI
 do-want=ver=ADD.FOC=3PROX **Ayako** ACC **dog-NMZ**
 [Hannah wants a dog and] “**Ayako_F** also wants a dog.”

However, when this sentence is rendered with the nominal *wáci* as its predicate, its interpretation becomes restricted: the =ǰa can now only associate with that nominal. That is, when *wáci* was focused in (478b), the speaker rejected it, saying that it only meant that Ayako wants something else and a dog as well.

- (478) a. ✓ wáciʔəmχeʔe ʔəʃʔεχsdəsəwεʔs
 wAs-HI=ʔm=ǰa=i ʔǰ-ʔεχsd-sw=εʔ=s
 dog-NMZ=ver=ADD.FOC=3PROX do-want-PASS=INVIS=3POSS
 [Hannah wants a horse and] “she also wants a **dog_F**.”
- b. ✗ wáciʔəmχeʔe ʔəʃʔεχsdəsəwεʔs **Ayako**
 wAs-HI=ʔm=ǰa=i ʔǰ-ʔεχsd-sw=εʔ=s **Ayako**
 dog-NMZ=ver=ADD.FOC=3PROX do-want-PASS=INVIS=3POSS **Ayako**
 [Hannah wants a dog and] “**Ayako_F** also wants a dog.”

In other words, when the focus is marked by other means, it appears that the additive must associate with that focus.

A further judgment, however, suggests a refinement of this claim. Rather than be a condition on the interpretation of the additive, the judgment in (478b) may be a judgment about focusing *wáci* when there is no need to. That is, (478b) was not a context in which there is an obvious alternative to *wáci*.⁵ When the context was more precisely specified as one in which the basic question is “What does each person want?”, the additive answer was accepted even though the predicate (*qasʔaney*, “shirt”) was not the associate of the additive.

- (479) *Context: We’re making Christmas lists – so-and-so wants this, this other person wants that, etc. – and get to Pat and Sarah.*

⁵As I note in §1.8, speakers do not *always* reject foci when the discourse does not provide one. After all, focus does not always reference an explicit question under discussion; sometimes it is the way a speaker indicates what question they are answering. Speakers sometimes “accommodate” (and accept the utterance), and sometimes they do not (and reject the utterance).

- a. $\dot{q}\acute{o}s\dot{p}\acute{o}n\acute{e}y\acute{i}$ $\dot{p}\acute{o}\check{x}\dot{p}\acute{e}\check{x}s\dot{d}\acute{o}s\acute{o}\acute{w}\acute{e}\dot{p}s$ Pat
 $\dot{q}\acute{o}s-k_hn-ay=i$ $\dot{p}\acute{o}\check{x}-\dot{p}\acute{e}\check{x}s\dot{d}-s\acute{w}=a=a\dot{p}=s$ Pat
shirt-body-NMZ=3DIST do-want-PASS=a=INVIS=3POSS Pat
“Pat wants a shirt...”
- b. $\dot{q}\acute{o}s\dot{p}\acute{o}n\acute{e}\dot{p}\acute{a}m\check{x}\acute{e}\dot{p}\acute{e}$ $\dot{p}\acute{o}\check{x}\dot{p}\acute{e}\check{x}s\dot{d}\acute{o}s\acute{o}\acute{w}\acute{e}\dot{p}s$ Sarah
 $\dot{q}\acute{o}s-k_hn-ay=\dot{p}m=\check{x}a=i$ $\dot{p}\acute{o}\check{x}-\dot{p}\acute{e}\check{x}s\dot{d}-s\acute{w}=a=a\dot{p}=s$ Sarah
shirt-body-NMZ=VER=ADD.FOC=3DIST do-want-PASS=a=INVIS=3POSS Sarah
“...and Sarah also wants a **shirt**.”

That is, the rejection in (478b) does not necessarily mean that an additive and an explicitly marked focus *must* associate. It suggests instead that interlocutors expect each other not to focus things for no reason, and when there is a focus operator, and a marked focus, and no other clear reason to mark that focus, they prefer to interpret the marked focus as the associate of the operator.

7.2.5 Negative additive sentences

Kwak’wala does not appear to have a “too/either” distinction (cf. McCawley, 1988; Rullmann, 2003), in which the polarity of the sentence determines which of two additive operators can be used.

- (480) a. “Ian cooked the food. He washed the dishes, too/*either.”
b. “Ian didn’t cook the food. He didn’t wash the dishes, either/?too.”

(Rullmann, 2003)

On the other hand, English “also” does not have this property; it does not appear to be sensitive to polarity in this way.

Kwak’wala $=\check{x}a$ is of the “also” type (insensitive to polarity) rather than the “too/either” type (sensitive to polarity); it is used in both positive and negative sentences.

(481) a. kʲiʔsən kəlxa
 kʲiʔs=n klxa
 not=1 roll
 “I don’t drive.”

b. kʲiʔsʔəmχəʔən kəlxa
 kʲiʔs=ʔm=χa=n klxa
 not=VER=ADD.FOC=1 roll
 “I **don’t** drive **either**.”

(482) a. kʲiʔsənʔs pola,
 kʲiʔs=nʔs pola,
 not=1INCL poor
 “We’re not poor...”

b. kʲiʔsʔəmχəʔənʔs q̇i q̇ed
 kʲiʔs=ʔm=χa=nʔs q̇i-q̇i-w ad
 not=VER=ADD.FOC=1INCL REDUP-many-RELATE
 “...but we **aren’t** rich **either**.”

(483) a. kəyos ləʔeʎa
 kʲyos l-w iʎa
 none go-indoors
 “No one went inside...”

b. kəyosʔəmχəʔe laχa ʎasanoy
 kʲyos=ʔm=χa=i la=χa ʎas-anw-ay
 none=VER=ADD.FOC=3DIST PREP=ACC out.front-??-NMZ
 “...**no one** was outside, **either**.”

ʔugʷaq- seems to be of this type, as well, likewise occurring in negative sentences.

- (484) a. $\dot{k}i\dot{?}sla\check{x}e$ Ayako $h\acute{e}m\acute{x}\dot{?}i$ $\check{x}a$ $\dot{?}ald\dot{?}i$
 $\dot{k}i\dot{?}s=l\check{x}=i$ Ayako $hm-x\dot{?}id$ $\check{x}a$ $\dot{?}ls-w\dot{i}$
 not=entirely=EMPH?=3DIST Ayako eat-CHANGE ACC fat-NMZ
 “Ayako won’t eat meat at all.”
- b. $\dot{?}i\dot{?}s\dot{?}aml\acute{o}\check{x}\acute{o}\dot{?}e$ $\dot{?}ug^waqa$
 $\dot{?}i\dot{?}s=\dot{?}m=l\check{x}=\check{x}a=i$ $\dot{?}ug^waqa$
not=VER=EMPH?=ADD.FOC=3DIST also
 “She [Hannah] **won’t** [eat meat], **either.**”

7.3 Exclusive operators

7.3.1 Three exclusive operators

Exclusive operators are those, like English “only”, “just”, and “merely”, that assert that alternatives to the sentence are *not* true. For example, (485a) denies that I drink (say) tea in the morning, whereas (485b) denies that I drink coffee in (say) the evening.

- (485) a. I only drink COFFEE in the morning.
 b. I only drink coffee in the MORNING.

Kwak’wala has a variety of exclusive operators, but their distribution is rather different than their English equivalents; each Kwak’wala exclusive operator excludes alternatives to a different part of the sentence:

- (486) a. *hig-* is used to exclude alternatives to the sentence’s subject (487a).
 b. *?o-* is used to exclude alternatives to the sentence’s predicate (487b).
 c. *?al-* is used to exclude alternatives to a time phrase (487c).

That is, while English “only” can be used for excluding subject alternatives, predicate alternatives, or time alternatives, Kwak’wala uses three different operators. We can see this variation in the sentences in (487). When the subject is the point of variance between the alternatives, *hig-* is chosen (487a); when the predicate is the point of variance, *?o-* is chosen (487b); when the time phrase is the point of variance, *?al-* is chosen (487c).

(487) a. *Context: No one else drinks coffee in the morning, so I make a pot just for myself.*

higamən naqa ʃa kafɪ ʃa gəʔala
 higa=ʔm=n naqa ʃa kafɪ ʃa gʔ-ala
 only=VER=1 drink ACC coffee ACC early-ONGOING
 “Only I drink coffee in the morning.”

b. *Context: It takes me a long time in the morning to work up an appetite, so I skip breakfast and drink a coffee instead.*

ʔonaxʷamən **kafɪga** ʃa ɡəʔala
 ʔwa=naxʷa=ʔm=n kafɪ-ga ʃa ɡʔ-ala
 so=ever=VER=1 coffee-consume ACC early-ONGOING
 “I only **drink coffee** in the morning.”

c. *Context: I am a morning coffee drinker, but if I have coffee at any other time of day it disrupts my sleep schedule.*

ʔaɫnaxʷamən kafɪga **ʃa ɡəʔala**
 ʔaɫ=naxʷa=ʔm=n kafɪ-ga ʃa ɡʔ-ala
 late=ever=VER=1 coffee-consume ACC early-ONGOING
 “I only drink coffee **in the morning**.”

It should be noted at the outset, however, that the above does not mean that there exists a *unique* expression of a particular exhaustive meaning; a particular exclusive meaning can be expressed in a variety of ways. The Kwak’wala operators above associate with potentially larger phrases than the focus itself – with “focus phrases” (Drubig, 1994; Wagner, 2006; Krifka, 2006; Rochemont, 2012b) – and so when excluding alternatives to, say, “butterflies” (*həmumu*), it is possible to express the butterflies as a DP subject (= *ida həmumu*) associated with *hig-* in (489a), or as a DP object within the VP (*liʔloʔ ʃa həmumu*) associated with *ʔo-* in (489b).⁶

⁶These do not exhaust the possibilities for expression, either. For example, it is also possible to express the entire sentence as an NPC (§6.5.2), so that *həmumu* is the predicate itself and *ʔo-* is the exclusive operator.

(488) ʔoʔəm **həmumu**wi loɫanəmɛʔsa gəngənanəm
 ʔwa=ʔm **hmumu**=i loʔ-w.anm=a=aʔ=sa gn-gn-w.anm
 so=VER **butterfly**=3DIST get-result=a=INVIS=OBL REDUP-young-person
 “The things caught by the children were just **butterflies**.”

(489) *Context: There were various kinds of bugs that the children could have caught, but at the end of the day their nets only contained butterflies.*

a. *higaʔəmida həmumu loʔanəməʔsa gəngənanəḿ*
higa=ʔm=i=da hmumu loʔ-w anm=a=aʔsa gn-gn-w anm
 only=VER=3DIST=DET **butterfly** get-result=a=INVIS=3POSS REDUP-young-person
 “The children only caught **butterflies**.” (Rough lit: “**Butterflies** were the only thing caught by the children.”)

b. *ʔomida gəngənanəḿ liʔloʔ ǰa həmumu*
ʔwa=ʔm=i=da gn-gn-w anm ly-loʔ ǰa hmumu
 so=VER=3DIST=DET REDUP-young-person REDUP-get ACC **butterfly**
 “The kids only **caught butterflies**.”
 Speaker comment: “Nothing else, just butterflies.”

I will explore the relationship of operators to focus phrases more thoroughly in the sections that follow; this illustration is only to emphasize that there are various options in the expression of exclusives. So, the examples in (487) only illustrate that particular *sentences* have, by virtue of the operator chosen, a particular exclusive interpretation (or a particular range of exclusive interpretations); they do not illustrate that a particular exclusive interpretation must be expressed with a particular exclusive operator.⁷

All exclusive sentences receive the “discourse” enclitic =ʔm; in §8.7.3 I propose an explanation for why this might be.

Exclusive operators, particularly ʔo-, are frequent in texts, and for some of them, the alternatives are made explicit in the context.

(490) *Context: A lost boy was helped by the Wildman. Upon his rescue, the boy invites the Wildman back home with him, but the Wildman declines, saying he has to stay behind to help other lost children.*

a. *ʔisən wəl la neḿak^w ʔəwuʔs*
ʔis=n wəl la neḿak^w ʔaw=uʔs
 not=1 can go go.home with=2POSS
 “I can’t go back home with you...”

⁷There are, however, tendencies; in my experience speakers tend, when alternatives to a DP are present, to find a way to express that DP as a subject and therefore use *hig-*. Expressing the DP within the VP and using ʔo- does occur, but is not as commonly chosen as the *hig-* construction.

- b. ʔoʔəmλən yuʔ loʃ laʃ^wa məkola
 ʔo=ʔm=λ=n yu=λ l=a=uʃ l=(a)ʃ^wa mkola
 so=VER=FUT=1 be=FUT PREP=EMBED=3MED PREP=ACC.3MED island
 “...I’ll **just** stay here on the island.” (Cranmer and Janzen, 2014)

(491) *Context: In this text, the speaker is describing how to play a Cat’s Cradle-like string activity.*

- a. laʔəm ʔolaqəla ʃən kodayu, kʲis wila ʔaʃəla la wasǰəmasəs.
 la=ʔəm ʔolaqəla ʃ=ən kodayu, kʲiʔs wila ʔəʃ-la la wasǰəmas=s
 then=VER really ACC=1POSS cat’s.cradle, not all 0-ONGOING then length=3POSS
 “It’s really a Cat’s Cradle game [where] you don’t get to use all of the fingers.”

- b. ʔoʔəm qʷidʔoyʔos caʔbidaʔo.
 ʔo=ʔəm qʷis-woy=uʔs ??
just=VER squeeze-NMZ?=2POSS ??
 “**Just** hold it squished.” (Dick and Shaughnessy, 1977)

- (492) a. dʒamgilaʃənuʔʃ^w ʔəbəmpwəʔə? ʃada wəʔok^w,
 dʒam-gi-l=(a)ʃənuʔʃ^w ʔbɪp-wʲ=a=aʔ ʃa=da wʔuk^w,
 jam-do-ONGOING=FUT=1EXCL mother-PAST=a=INVIS ACC=DET other,
 “Our mom made jam with the rest [of the fruit]...”

- b. **higam**isənuʔʃ^w həmxʔidsəwida g^wayū watermelon.
higa=ʔm=is=nuʔʃ^w hm-xʔid-sw=i=da g^w-_wayū watermelon.
only=VER=and.so=1EXCL eat-CHANGE-PASS=3DIST=DET say-NMZ watermelon
 “...and we **only** ate what was called ‘watermelon’.” (Cranmer and Janzen, 2014)

- (493) a. qʷəlixsɳax^wamulida qʷəlsqʷəlyak^wəʔə? ʔəxilaʃiʔs
 qʷliks-ɳax^wa=ʔm=wʲ=i=da qʷls-qʷls-wak^w=wʲ=a=aʔ ʔx-(g)il=(a)ʃ=iʔs
 by.self-ever=VER=PAST=3DIST=DET REDUP-old-NMZ=PAST=a=INVIS do-do=ACC=3POSS.REFL
 qʷəʃ^wəmcəwəʔ
 qʷəʃ^wm-cw=a=aʔ
 clothes-in=poss=INVIS
 “The elders made their own clothes.”

- b. ʔomisənʔs la $\text{kəlx}^{\text{w}a}$ $\text{la}\check{x}a$ kəlwilas
 $\text{ʔo}=\text{ʔm}=\text{is}=\text{nʔs}$ la $\text{klx}^{\text{w}a}$ $\text{l}=(\text{a})\check{x}a$ $\text{klx}^{\text{w}-w}\text{i}\check{l}-w,\text{as}$
 $\text{so}=\text{VER}=\text{and}=\text{linc}$ now buy $\text{PREP}=\text{ACC}$ buy-indoors-PLACE
 “Now we **just** buy them from the store.” (Goodfellow et al., 1991, p. 99)

It is often, although not always, clear in a text what alternatives are being invoked, and many of the syntactic and semantic phenomena discussed here can be observed in written Kwak’wala as well.⁸

7.3.2 *hig-*

hig- is the DP-associating exclusive operator, associating with the sentential subject.

- (494) *Context: It’s a sunny day, and everyone but Masaki forgot to bring a hat.*

$\text{higa}\text{m}\check{u}\check{x}$ **Masakiy** \check{x} $\text{ʔ}\check{x}\check{\text{ə}}\text{la}$ sa $\text{ʔ}\check{\text{ə}}\text{t}\check{\text{ə}}\text{m}\check{l}$
 $\text{higa}=\text{ʔm}=\text{u}\check{x}$ **Masakiy**= q $\text{ʔ}\check{x}\text{-la}$ sa $\text{ʔt}-(\check{g})\text{m-l}$
 $\text{only}=\text{VER}=\text{3MED}$ **Masaki**= VIS do-ONGOING OBL hat-face-wear
 “Only **Masaki** is wearing a hat.”

In (494), alternatives to Masaki are ruled out, rather than alternatives to *ʔətəmł* (“hat”). In order for *hig-* to associate with other arguments, they first have to be “promoted” to subject by one of Kwak’wala’s many “voice” suffixes (§B.3.4).

- (495) *Context: Masaki is going skinny dipping.*

$\text{higa}\text{ʔ}\check{\text{ə}}\text{m}$ $\text{ʔ}\check{x}\check{\text{ə}}\text{lasu}\text{ʔsu}\check{x}$ **Masakiy** \check{x} $\text{e}\text{ʔs}$ $\text{ʔ}\check{\text{ə}}\text{t}\check{\text{ə}}\text{m}\check{l}$
 $\text{hig}=\text{ʔm}$ $\text{ʔ}\check{x}\text{-la-s}\check{w}=\text{s}=\text{u}\check{x}$ **Masakiy**= $\text{q}=\text{a}=\text{i}\text{ʔs}$ $\text{ʔt}-(\check{g})\text{m-l}$
 $\text{only}=\text{VER}$ $\text{do-ONGOING-PASS}=\text{OBL}=\text{3MED}$ **Masaki**= $\text{VIS}=\text{EMBED}=\text{3POSS.REFL}$ hat-face-wear
 “Masaki is wearing only **his hat**.”

As with WH questions, NPCs, clefts, and equatives, a variety of voice suffixes can be used to promote the appropriate argument to the subject.

⁸However, when the alternatives are *not* clear in the context of the story, English translations should not necessarily be relied upon to reveal which alternatives are excluded. Sometimes translators, knowing that the Kwak’wala sentence contains one of the exclusive operators, try to shoehorn an “only” or “just” into the English translation, but put it in a position where it sounds best in English rather than in the position that best reflects the Kwak’wala semantics.

(496) *Context: We are discussing Pat's summer travel plans.*

higəʔəm ləʔasλəsuǎ Pateʔe Sweden
 hig=ʔm l-was=λ=s=uǎ Pat=a=i Sweden
 only=VER go-PLACE=FUT=3POSS=3MED Pat=EMBED=3DIST Sweden
 “Pat is only going to **Sweden**.” [as opposed to other places too]
 (Lit: “Sweden is Pat’s only destination.”)

Note that the subject =iʔs λətəmʌ in (495) occurs *after* the oblique argument =suǎ Masaki, and the subject =i Sweden in (496) occurs after the oblique argument =suǎ Pat, as they would in copular sentences rather than a predicative sentences; I will explore this in greater detail in §7.3.2.2.

Relying on the English translation here can be structurally misleading, as the most natural English rendering of an exclusive meaning and the most natural Kwak’wala rendering often have very different syntactic structures. In general, an English “is the only one that” translation would most closely reflect the Kwak’wala structure: “Masaki is the only one that is wearing a hat”, “His hat is the only thing Masaki is wearing”, “Sweden is the only place Pat is going”, etc.

The non-subject portion need not be verbal, as =ən çay(a) (“my younger sibling”) in (497) illustrates.

(497) higaʔmən çayʔi Meagan
 higa=ʔm=n çay=i Meagan
 only=VER=1 younger.sib=3DIST Meagan
 “**Meagan** is my only younger sibling.”

7.3.2.1 Origin of *hig-*

Although roots ending in voiced stops are less common than those ending in plain stops or resonants, we can see that *hig-* really does end in /g/, by observing the effect of a weakening suffix on it in (498).

(498) higəʔilʔəm
 hig-wil=ʔm
 only-in.house=VER
 “to be the only one in a house”

As we will see in (7.3.2.2), *hig-* shows the syntax of a copula, so one possible source of

its origin is that it is made from other copular material, the same material that makes up the third-person distal copula *he-* and the third-person proximal copula *ga-*. We can observe, for example, that the first-person copula *nug^wa* is probably likewise complex; the final [g^wa] is the realization of /ga/ after /u/. On the other hand, Hall (1888a, p. 104) gives both “hihya” (that is, *hixa*) and “higa” for this word, suggesting a potential connection with the *lixa* seen in Boas and Hunt (1905) (§7.3.3).

Whether *hig-* has other meanings or uses beyond “only” is unclear. It does not seem to occur in Boas and Hunt (1905), but occurs fairly frequently in Hall’s (1882; 1888b; 1897) translations of Christian prayers and scriptures.

In some sentences in Hall’s translations, *hig-* is used for “except”/“saving”/“but rather”. Some of these meanings could be captured instead with “only”, but for some of the sentences this would be awkward or impossible. For example, in his translations of Matthew 5:32 (and also Matthew 19:9) (Hall, 1882, p. 18, p. 73) where he uses *hig-* to translate “saving” in “That whosoever shall put away his wife, saving for the cause of fornication...”, and in his translation of Matthew 26:42 (Hall, 1882, p. 108), where he uses *hig-* to translate “except” in “...if this cup may not pass away from me, except I drink it, thy will be done”, and in his translation of Acts 8:31 (Hall, 1897, p. 43), as “except” in “How can I, except some man should guide me?” As with all Hall translations, it is never entirely clear how much is authentic Kwak’wala from fluent speakers and how much is coercion due to Hall’s limited understanding of Kwak’wala sentence structure; I suspect these uses are Hall trying to capture the English sentence structure “except for/but for” by over-extending the word he otherwise uses for “except”.⁹

7.3.2.2 Syntax of *hig-*

Sentences with *hig-* appear to be of the “copular” sentence type detailed in Chapter 4, with a copular element *higa*, the “discourse” particle =*ʔm*, a copular complement, and a subject.

Several of the copular-sentence idiosyncrasies can be seen in *hig-* sentences, like the appearance of the subject after oblique elements (§4.2.3) and the appearance of an =*a* before the subject when the prior constituent is complex (§4.2.6).

⁹Otherwise, the use of *hig-* in Hall’s translations at least in general seems to respect something like the *hig-*/*ʔo-* distinction still seen today. Hall usually chooses the appropriate one, except for somewhat over-using *hig-* and under-using *ʔo-*. I suspect that Hall had a rough intuition of when to use each – possibly, that *hig-* tended to associate with “nouns” and *ʔo-* tended to associate with “verbs” – but in some cases made the choice between them based on the word class of the English word in the King James Bible, rather than the grammatical role of the Kwak’wala word.

- (499) *higəʔəm həmeʔsuʔs* Catherinəʔeda k^wənik^w
hig=ʔm hm-ay-sw=s Catherin=**a=i=da** k^wns-_wk^w
 only=VER eat-NMZ-PASS=3POSS Catherine=EMBED=**3DIST=DET** bake.bread-PART
 “Catherine only eats bread.” (Lit: “Bread is Catherine’s only food.”)

hig- sentences also show the same “canonical”/“cleft” variation that copular sentences do.

- (500) *higamida* ʔaldʔi həmapsuʔs Pat
hig=ʔm=i=da ʔls-_wi hm-ap-sw=s Pat
 only=VER=**3DIST=DET** **fat**-NMZ eat-consume-PASS=3POSS Pat
 “Pat only eats **meat**.” (Rough lit: “It’s meat that’s the only thing eaten by him.”)

Like the copular sentences seen in Chapter 4, *hig-* sentences do not exhibit “enclitic doubling” agreement (§B.6.1.1), where a subject enclitic (usually the second-person medial =*u*ǰ) shows up in second position when the subject does not appear here:

- (501) *higaʔəm həmeʔsoʔoǰda* ʔ^ukutəla
hig=ʔm hm-ay=s=a=uǰ=da ʔ^ukutla
 only=VER eat-NMZ=3POSS=EMBED=**3MED=DET** **salmon**
 “He only eats **fish**.” (Lit: “Fish is his only food.”)

We can also observe that the morphology for the apparent copular complement is the same as the idiosyncratic morphology of copular complements (§4.2.6): [-suʔs] rather than [-səwəʔos] in (499), =*s* rather than =*u*ʔs (502), and the use of apparent prenominals (like =*i*) in postnominal positions (502).

- (502) *higamas* loʔanəmi
hig=ʔm=a=s la-w-ʔ-_wanm=i
 only=VER=QUES=**2** go-out-obtain-obtained=**3DIST**
 “Is that all you caught?” (Lit: “Is that the only thing got by you?”)

Finally, one occasionally encounters the “presentation” enclitic =*as* that appears on other copulas in situations where we might use the “there is” construction in English (§4.6.2).

- (503) *Context: The author is describing some of her first days in residential school.*

*higamas*ʔi Martha ʔuʔ Pauline laǰada skul
hig=ʔm=as=ʔ=i Martha ʔw Pauline l=(a)ǰa=da skul
 only=VER=PRNTV=FUT=3DIST Martha and Pauline PREP=ACC=DET school
 “There’s only Martha and Pauline at the school.” (Cranmer and Janzen, 2014)

7.3.2.3 Association of *hig-*

If we set up parallel contexts, we can see clearly the restricted association of *hig-*.

(504) *Context: Pat is visiting Vancouver Island for a holiday dinner. He has turkey, potatoes, veggies – the works. His dinner companions, however, are vegetarians, and are only eating the potatoes and veggies.*

- a. ✓ *higami* **Pat** *həmap* *ʃa ʔəldʒi*
higa=ʔm=i **Pat** *hm-ap* *ʃa ʔls-wi*
 only=VER=3DIST **Pat** eat-consume ACC fat-NMZ
 “Only **Pat** is eating the meat.”

- b. ✗ *higəʔəm* *həmapsuʔs* **Pateʔeda** *ʔəldʒi*
hig=ʔm *hm-ap-sw=s* **Pat=a=i=da** *ʔls-wi*
 only=VER eat-consume-PASS=3POSS **Pat**=EMBED=3DIST=DET fat-NMZ
 Intended: “Only **Pat** is eating the meat.”
 (Actually: “Pat eats only the meat.”)

(505) *Context: Pat and his friends go to a steakhouse where, if you can consume an entire 64 oz. steak, you get it for free. Pat takes the challenge, but his dinner companions opt for smaller and more balanced portions. Pat refuses to eat any of the bread, salad, potatoes, etc., lest they fill him up prematurely.*

- a. ✗ *higami* *Pat* *həmap* *ʃa ʔəldʒi*
higa=ʔm=i *Pat* *hm-ap* *ʃa ʔls-wi*
 only=VER=3DIST *Pat* eat-consume ACC **fat**-NMZ
 Intended: “Pat eats only **the meat**.”
 (Actually: “Only Pat is eating the meat.”)

- b. ✓ *higəʔəm* *həmapsuʔs* **Pateʔeda** *ʔəldʒi*
hig=ʔm *hm-ap-sw=s* **Pat=a=i=da** *ʔls-wi*
 only=VER eat-consume-PASS=3POSS **Pat**=EMBED=3DIST=DET **fat**-NMZ
 “Pat eats only **the meat**.”

When the subject is =i *Pat* (504a, 505a), the *hig-* sentence can exclude alternatives to *Pat* (504a) but cannot exclude alternatives to *meat*. On the other hand, when the subject is =ida *ʔəldʒi* (“the meat”¹⁰) (504b, 505b), the *hig-* sentence can exclude alternatives to *meat* (505b)

¹⁰One speaker felt that *ʔəldʒi*, strictly speaking, refers to seal blubber – *ʔls-* is the root for “fat” – but we can also observe its semantic extension to other meats (e.g. Goodfellow et al., 1991, p. 25). This appears to have been true in Boas and Hunt’s era as well; (517) is probably just drawing a comparison between rock and living flesh, rather

but cannot exclude alternatives to *Pat*.

We can verify further that *hig-* associates with its subject DP through an exclusive-contradiction test: by pairing an exclusive sentence with an additive sentence that differs from its preadjacent in exactly one word or phrase, we can see which alternatives the exclusive operator does and does not exclude.

Consider the behavior of “only” in English when paired with an additive:

- (506) a. ✓ “Pat eats only fish, and Laura eats fish, too.”
b. ✓ “Pat eats only fish, and he cooks fish, too.”
c. ✗ “Pat eats only fish, and he eats poultry, too.”

That the sentence in (506c) is a contradiction, while the sentences in (506a) and (506b) are not contradictions, shows that “Pat eats only fish” excludes alternatives to “fish”, but does not exclude alternatives to “cooks” or “Pat”.

Contradiction tests show that the use of *hig-* is incompatible with an assertion that the predicate is also true of an alternative to the subject.

(507) *Context: I had recently performed in a band with several other people.*

- a. *higam̩i* **Ben** *dən̩x̩əla*,
higa=ʔm=i **Ben** *dn̩x̩-la*
only=VER=3DIST Ben sing-ONGOING
“Ben is the only one singing;”
- b. ✗ *ʔug^waqəʔəm̩x̩eʔe* **Craig** *dən̩x̩əla*
ʔug^waqa=ʔm=x̩a=i **Craig** *dn̩x̩-la*
also=VER=ADD.FOC=3DIST Craig sing-ONGOING
“...Craig is singing, too.”

(508) *Context: The next room is full of noisy animals.*

- a. *higam̩ən* **biʔbusiḥ** *x̩əntala*,
higa=ʔm=n *b̩y-busi=q* *x̩nt-(k)_ha-la*
only=VER=1 REDUP-cat=VIS snore-sound-ONGOING
“**My cats** are the only ones snoring;”

than rock and fat, or rock and seal blubber.

- b. ✗ ʔug^waqəʔəmǰəʔən wǰciǰ ǰəntala
 ʔug^waq=ʔm=ǰa=n wǰs-hi=q ǰnt-(k)_ha-la
 also=VER=ADD.FOC=1 dog-NMZ=VIS snore-sound-ONGOING
 “...my **dog** is snoring, too.”

On the other hand, *hig-* is compatible with the assertion that an alternative predicate is true of the same subject.

- (509) a. higami Ben dənǰəla,
 higa=ʔm=i Ben dnǰ-la,
 only=VER=3_{DIST} Ben sing-ONGOING,
 “**Ben** is the only one singing;”

- b. ✓ ʔug^waqəʔəmǰeʔe ʔəmǰa=sa gəta
 ʔug^waqə=ʔm=ǰa=i ʔmǰa=sa gta
 also=VER=ADD.FOC=3_{DIST} play=OBL guitar
 “...he’s also **playing guitar**.”

There is no contradiction in (509), because *hig-* in this sentence only rules out alternatives to Ben, not alternatives to playing guitar.

In §7.3.4.3 below we can see that *ʔo-* has the opposite results for these same tests.

7.3.2.4 Association within the subject

Although *hig-* only excludes alternatives to the subject, any word or phrase within the subject can be the point of variance between those alternatives. That is, while the focus must be in the subject, its location is “free” within the subject, and there do not appear to be syntactic or semantic restrictions on which element can be the focus.

In the examples below, we see instances of *hig-* associating with complex arguments of the form “the *X* that was *Y*’ed by *Z*”. Within this arguments, any of the elements can be the focus, regardless of type; (510-512) illustrate that, even though *hig-* does not associate with sentential predicates, the focus *within* the subject can be a predicate. Using the terminology in §5.6.2, it is not that the subject is a focus; the subject is a *focus phrase* (§5.6.2), containing a focus but potentially larger than it.

- (510) *Context: Laura and Jon have come back from a fishing trip, with Laura having caught two fish. When they get home, the speaker steals and eats one of Laura’s fish. They confront him angrily, and he tries to partially assuage their anger:*

- a. higamən həmʔicəwida
 higa=ʔm=n hm-xʔid-sw=i=da
 only=VER=1 eat-CHANGE-PASS=3DIST=DET
 sacəm kiʎanəms Laura
 sas-*eh*m kiʎ-*w*anm=s Laura
 spring.salmon-genuine net.fish-obtained=3POSS Laura
 “I only ate **the [spring salmon]_F that Laura caught...**”

- b. kiʔs hedida məʔik
 kiʔs hed=i=da mʔik
 not be.3DIST=3DIST=DET sockeye
 “...not **the sockeye_F.**”

(511) *Context: Laura and Jon have come back from a fishing trip, each having caught a fish. When they get home, the speaker steals and eats Laura’s fish. They confront him angrily, and he tries to partially assuage their anger:*

- a. higamən gəlʔicəwi
 higa=ʔm=n gluʎ-xʔid-sw=i
 only=VER=1 steal-CHANGE-PASS=3DIST
 sacəm kiʎanəms Laura
 sas-*eh*m kiʎ-*w*anm=s Laura
 spring.salmon-genuine net.fish-obtained=3POSS Laura
 “I only stole **the spring salmon that Laura_F caught**”

- b. kiʔs hedi kiʎanəms Jon
 kiʔs hed=i kiʎ-*w*anm=s Jon
 not be.3DIST=3DIST net.fish-obtained=3POSS Jon
 “...not **the one that Jon_F caught.**”

(512) *Context: Laura and Jon come back from a fishing trip, with Laura having caught only one fish. To pad out the catch a little bit, she stops at the store on the way home and buys a second one. When she gets home, the speaker steals and eats the store-bought fish. Laura and Jon discover this and confront him angrily, and he tries to partially assuage their anger:*

- a. *higamən gəlulʔicəwɪ* *sacəm*
higa=ʔm=n gl-w-λ-xʔid-sw=i *sas-_{eh}m*
 only=VER=1 crawl-out-obtain-CHANGE-PASS=3DIST spring.salmon-genuine
kiλanəms *Laura*
kiλ-_wanm=s *Laura*
net.fish-obtained=3POSS *Laura*
 “I only ate **the spring salmon that Laura caught**_{F...}”

- b. *kiʔs hedi* *kəlwanəms*
kiʔs hed=i *klx^w-_wanm=s*
 not be.3DIST=DET buy-obtained=3POSS
 “...not **the one she bought**_{F.}”

As we can see from the above, even if the minimal point of variation – what we have been calling the focus – is a subconstituent, and even if it is not a DP or of type *e*, the sentence is acceptable so long as the focus is within the DP subject.

A further judgment suggests that this DP is indeed a focus phrase in the sense of Drubig (1994), Wagner (2005), Krifka (2006), and Rochemont (2012b). Drubig and Krifka use the “but *X*” corrective construction in English as evidence of scope regarding the association of negation.

- (513) a. “I’m sorry, Mary doesn’t date [firemen who love DOGS_F]_{FP}, but firemen who love CATS.”
 b. ??“I’m sorry, Mary doesn’t date [firemen who love DOGS_F]_{FP}, but CATS.”

The sentence in (513b) is very awkward, at best, as a way to express that Mary dates firemen who like cats; rather, it sounds as if she is dating cats.

For the Kwak’wala exclusive sentences below, a speaker offered a similar judgment. In the sentence in (514), the associate of *higa* is =*i kūtəla loλanəms Laura* (“the fish that Laura caught”).

- (514) *higəmən həm-xʔicuwɪ* *kūtəla loλanəms* *Laura*
hig=ʔm=n hm-xʔid-sw=i *kūtla loλ-_wanm=s* *Laura*
 only=VER=1 eat-CHANGE-PASS=3DIST salmon get-result=OBL *Laura*
 “I only stole the fish Laura caught.”

Contrasting this to =*ida kūtəla loλanəmʔs Jon* (“the fish that Jon caught”) in (515a) means that the speaker didn’t eat the fish that Jon caught, but a speaker noted that contrasting it to =*uǎ*

Jon in (515b) would mean that the speaker didn't eat *Jon*.¹¹

(515) a. ✓ *k*iʔs heyida *k*utəla loʎanəmʔs Jon
 *k*iʔs he=i=da *k*utla loʎ-w anm=s Jon
 not be.3DIST=3DIST=DET salmon get-result=OBL Jon
 “... not the fish that Jon caught.”

b. ✗ *k*iʔsuǰda Jon
 *k*iʔs=uǰ=da Jon
 not=3MED=DET Jon
 Intended: “... not Jon.”
 Speaker comment: “I didn't eat Jon!”

This judgment suggests that, like the English examples in (513), that the scope of association (in this case, the association of *hig-*) is the entire phrase (=i *k*utəla loʎanəms *Laura*), rather than the *focus* in the narrow sense of the minimal variation between the alternatives (*Laura*).

7.3.3 *lix-*

In the Boas and Hunt texts (Boas and Hunt, 1905), *hig-* does not appear to be present, but there is an apparent equivalent *lix-*¹², that in many sentences seems to have the same or similar syntax.

(516) wε, ləm̄is lixaʔəm q̄^wəli **Həmalakawaʔa.**
 wε, l=m̄=is lixa=ʔm q̄^wl=i **Həmalakawaʔa.**
 well, now=VER=AND.SO only=VER live=3DIST **Həmalakawaʔa**
 “**Həmalakawaʔa** was the only one who was spared (lit: who lived).”

(Boas and Hunt, 1905, p. 240)

(517) *Context: The main characters are being warned about an enemy with a body made of stone.*

la lixaʔəm ʔəldʔi **ʔuǰawaʔas**
 la lixa=ʔm ʔəls-hi=i **ʔw-ǰw-aʔ=a=s**
 now only=VER fat-NMZ=3DIST **do-throat-NMZ=A=3POSS**
 “Only **his neck** is flesh.”

(Boas and Hunt, 1905, p. 151)

¹¹This sentence should probably have been constructed as *k*iʔs yuwuǰ *Jon* instead, to better parallel the correction in (515a) and the corrections above. However, what is important for this example is the speaker's comment, that she was rejecting this sentence because it has the wrong meaning.

¹²One of my consultants recognized this word, but felt it might be a different dialect: “*lix*aʔəm *li*uǰ , ‘he's going to be the one’. That means *hig*aʔəm *li*uǰ , in ours.”

While the syntax of Boas/Hunt-era Kwak’wala is not always clear to me, we can still observe that *lixa* has an unusual syntax very much like that of *hig-*. For example, in (518), the associate appears to be the subject =*ida* *láʔisi láwá miʔanaʔi láwá gawiqanəmi* (“mussels and large and small clams”), but this subject comes after an oblique argument *sa Qʷiqʷsutinuχʷ* (“of/by the Qʷiqʷsutinuχʷ”), just as it would in a *hig-* sentence.

- (518) la lixaʔəm həməsa Qʷiqʷsutinuχʷida láʔisi láwá miʔanaʔi
 la lixa=ʔm hm-aý=sa Qʷiqʷsutinuχʷ=i=da láʔisi láwá miʔanaʔi
 then only=VER eat-NMZ=3POSS Qʷiqʷsutinuχʷ=3DIST=DET **mussels and large.clams**
láwá gawiqanəmi.
láwá gawiqanmi
and small.clams

“The Qʷiqʷsutinuχʷ ate only **mussels and large and small clams.**”

(Boas and Hunt, 1905, p. 134)

We can also observe that in many *lix-* sentences, the main predicate has been made passive or nominalized in order to promote the associate to subjecthood, exactly as we would expect for *hig-*.

- (519) wε, laʔəʔe lixaʔəm ʔaχʔicəwida
 wε, la=la=i lixa=ʔm ʔaχ-xʔid-sw=i=da
 well, then=REPORT=3DIST only=VER do-CHANGE-PASS=3DIST=DET
muwi sisacəma.
muw=i sy-sas-_{eh}ma
four=INVIS REDUP-spring.salmon-genuine

“He only took **the four spring salmon.**”

(Boas and Hunt, 1905, p. 306)

- (520) wε, lixaʔəm dəʔəxʷs Kalamínəʔeʔs ʔəkʷiseʔ
 wε, lixa=ʔm d-_wkʷ=s Kalamín=a=iʔs ʔkʷis=a=aʔ
 well, only=VER carry-PART=3POSS Kalamín=EMBED=3POSS.REFL **bow=POSS=INVIS**
ləwíʔs mucaqεʔ hanaʔəma.
ləw=iʔs mu-caq=a=aʔ hnλ-_{eh}ma
and=3POSS.REFL four=CLASS=POSS=INVIS hunt-genuine

“Kalamín carried only **his bow and four arrows.**”

(Boas and Hunt, 1905, p. 403)

Sentences like the above strongly suggest that *hig-* and *lix-* have the same basic syntax and semantics.

7.3.4 *ʔo-*

ʔo- forms an exhaustive operator that associates with the predicate phrase.

(521) *Context: Hannah is asleep, and Pat and Ayako cannot wake her up.*

- a. *kʰiʔs cəxʔida*
kʰiʔs cək-(x)_hida
 not awake-CHANGE
 “She wouldn’t wake up.”
- b. *ʔoʔəm sən bən miʃa*
ʔwa=ʔm snbnd miʃa
 so=VER all.day sleep
 “She just slept and slept and slept.”

(522) *Context: The author is describing her first days at residential school.*

- ʔoʔəm kwakʰwala, kʰisən wɛl mamalakala*
ʔwa=ʔm kwakʰ-(k)_ha-la, kʰis=n wɛl mama-la-(k)_ha-la
 so=VER kwakw-sound-ONGOING, not=1 can white.person-sound-ONGOING
 “Just speaking in Kwak’wala, I couldn’t speak English.”

(Cranmer and Janzen, 2014)

(523) *Context: I had recently bleached my hair as part of a Halloween costume, and people think it’s a wig.*

- a. *yumən ʔolakal səyux̃*
yu=ʔm=n ʔw-ala-kal sʔa=uʃ
 be.3MED=VER=1 so-ONGOING-sound hair=3MED
 “This is my real hair!”
- b. *ʔomən λayu ʃux̃ ǧʷiʔstəwasəs*
ʔwa=ʔm=n λayu ʃ=uʃ ǧʷi-ʔstw-was=s
 so=VER=1 change ACC=3MED whatever-eye-PLACE=3POSS
 “I just changed its color.”

ʔo- is more obviously “scalar” than *hig-*,¹³ and many uses of *ʔo-* associate with inaction or actions that could be described as the “lesser” option – staying indoors rather than going

¹³Although, like Beaver and Clark (2008), I implement exclusives as scalar whether or not they appear to use a specific contextual scale.

outside, taking abuse rather than fighting back, going home rather than continuing to play, etc. – although it should be emphasized that *ʔo-* is not always pejorative (cf. §7.3.6).

(524) a. Lola, wígilas ǰ^wa n̄ala
 Lola, wí-gi-la=s ǰ^wa n̄ala
 Laura, what-do-ONGOING=2 ACC.3MED day
 “Laura, what are you doing today?”

b. ʔoʔəmλən k^wəʔelλ
 ʔwa=ʔm=λ=n k^w-ʔil=λ
 so=VER=FUT=1 sit-indoors=FUT
 “I’m just going to stay inside.”

(525) *Context: We are discussing what the speaker was doing just before our meeting.*

a. wígilaxdas ǰa məʔəguçaqilaxdεʔ
 wí-gi-la=xd=as ǰa mʔl-gu-çaqila=xda=aʔ
 what-do-ONGOING=IPAST=2 ACC two-up-time=IPAST=INVIS
 “What were you doing at noon?”

b. ʔoʔəmxdən k^wəʔela
 ʔwa=ʔm=xd=n k^w-ʔila
 so=VER=IPAST=1 sit-indoors
 “I was just sitting there.”

It is also very common to find *ʔo-* as a component of sentences like (527) about “pretending”, “joking”, or “teasing”, in the sense of “just pretending” or “just kidding” rather than representing the true situation.

(526) ʔobulaʔəm
 ʔo=bula=ʔm
 so=pretend=VER
 “just pretending”

(527) *Context: Tawixilakwi has come to visit his sweetheart, who jokingly chides him for never coming to see her.*

wε, ʔoʔəmlawisi ʔug^waqi Təwixilak^{wi} tatig^walaq
wε, ʔwa=ʔm=lá=wis=i ʔug^waq=i Təwixilak^{wi} ta-tik^w-_wala[?]=q
well, so=VER=REPORT=AND=3DIST also=3DIST Təwixilakwi REDUP-tease-sound?=ACC
“Tawixilakwi responded jokingly.” (Lit: “Tawixilakwi also just teased her.”)

(Boas and Hunt, 1905, p. 24)

7.3.4.1 Origin of ʔo-

This exclusive ʔo- is based on the root ʔw-, which I have glossed as “so”; it is one of the “empty” or “dummy” roots, and forms a variety of stems, including those dealing with truth or things being-so, like in (528).

- (528) a. ʔuq^wa
 ʔw-qa
 so-feel
 “to believe” (Lit: “to feel that it is so”)
- b. ʔola
 ʔw-ala
 SO-ONGOING
 “to be true”
- c. ʔolaʔa?!
 ʔw-ala=a
 SO-ONGOING=QUES
 “Is that so!?!”, “Really!?!”, “Well I’ll be!”

7.3.4.2 Syntax of ʔo-

Unlike *hig-*, ʔo- appears to be an ordinary auxiliary. We see, for example, the second-position medial enclitic doubling that we would expect from a true auxiliary (§B.6.1.1).

- (533) a. ʔoʔəm dənχəli Ben,
 ʔwa=ʔm dnχ-l=i Ben,
 so=VER sing-ONGOING=3DIST Ben
 “Ben just sang;”
- b. ✗ ʔug^waqəʔəmχəʔe ʔəmɫa sa gəta
 ʔug^waq=ʔm=χa=i ʔmɫa sa gta
 also=VER=ADD.FOC=3DIST play OBL guitar
 “...he played his guitar, too.”
 Speaker comment: “You said ʔo-, that means he only did one thing, so it’s a contradiction.”

Meanwhile, however, ʔo- is compatible with the assertion that the predicate is true of an alternative subject (534); again this is the opposite result as that seen in §7.3.2.3.

(534) *Context: The next room is full of noisy animals.*

- a. ʔomũχ χəntalũχ biʔbusiχ,
 ʔwa=ʔm=uχ χnt-(k)_ha-l=uχ by-busi=q
 so=VER=3MED snore-sound-ONGOING=3MED REDUP-cat=VIS
 “The cats are just snoring;”
- b. ✓ ʔug^waqəʔəmχəʔən waciχ χəntala
 ʔug^waq=ʔm=χa=n was-_hi=q χnt-(k)_ha-la
 also=VER=ADD.FOC=1 dog-NMZ=VIS snore-sound-ONGOING
 “...my dog is snoring, too.”

7.3.4.4 Association within the predicate

Like *hig-*, ʔo- has a particular phrase that it excludes alternatives to – in the case of ʔo-, the sentential predicate – but within that phrase anything can be the minimal point of variance, even if it is not itself a predicate. That is, ʔo- can also exclude alternatives to elements inside the predicate, like *g^wada* (“quarter”) in (535) or *məʔl* (“two”) in (536).

(535) *Context: The speaker is telling a story of a trip to the big city, in her father’s day.*

- ʔoʔəm haɫaqa sa g^wada qəʔeʔs k^wəlilas
 ʔwa=ʔm haɫaqa sa g^wada qa=iʔs k^wl-_wiɫ-_was
 so=VER pay OBL quarter for=3POSS.REFL lie-indoors-PLACE
 “He only paid a **quarter** for his hotel.”

It should be emphasized that it is not that *ʔo-* associates with *verbs* or *verb phrases*; it associates with whatever the predicate phrase happens to be. Example (539) illustrates this; in (539a) *ʔo-* associates with a verbal predicate phrase *liʔloł ǰa hǰmumu* (“get butterflies”), but in (539b) it associates with a nominal predicate phrase *gǰnanǰm* (“be a child”).

(539) a. ʔomida gǰngǰnanǰm liʔloł ǰa hǰmumu
 ʔwa=ʔm=i=da gn-gn-*w*anm lǰy-loł ǰa hmumu
 so=VER=3DIST=DET REDUP-young-person REDUP-get ACC butterfly
 “The kids only caught butterflies.”

b. ʔoʔǰm gǰngǰnanǰmida loł ǰa hǰmumu
 ʔwa=ʔm gn-gn-*w*anm=i=da loł ǰa hmumu
 so=VER REDUP-young-person=3DIST=DET get ACC butterfly
 “The ones who caught butterflies were just kids.”

7.3.4.5 *ʔo-* in “always” and “still”

ʔo- is used in almost all “always” (540) and “still” (541b, 541c) contexts.

(540) a. *Context: Victoria is accessible by ferry or plane, but I never take the plane.*

ʔomǰn hǰyulis laǰs ǰa xiqayala
 ʔwa=ʔm=n hyulis la-ǰs ǰa xiqayala
 so=VER=1 always go-on.boat ACC ferry
 “I always catch the ferry.”

b. *Context: Spencer the cat is a very fussy, very proud cat. The other cats eat cat food, but...*

ʔomuǰ hǰyulis hǰmǰp ǰa kǰtǰla
 ʔwa=ʔm=uǰ hyulis hmǰ-ap ǰa kǰtla
 so=VER=3MED always eat-consume ACC salmon
 “He always eats fish.”

(541) a. kǰsʔǰms ǰ^wǰlyax^wʔida
 kǰs=ʔm=s ǰ^wls-*w*ak^w-xʔid=a
 not=VER=2 old-NMZ-CHANGE=A
 “You’re not a grownup yet!”

- b. ʔoxseʔəms gənanəma
 ʔwa=xse=ʔm=s gn-_wanm=a
 so=still=VER=2 young-person=A
 “You’re still a child.”
- c. ʔoxseʔəms ʔəmla suʔs ʔiʔəmləm
 ʔwa=xse=ʔm=s ʔmla s=uʔs ʔý-ʔaml-_wm
 so=still=VER=2 play OBL=2POSS REDUP-play-NMZ
 “You still play with your toys.”

-xse can serve on its own for this purpose (542c, 543b), but it is much more common that ʔo- accompanies it (542b,543a).

- (542) a. kʲiʔsxsemuħ ġəʔala
 kʲiʔs-xse=ʔm=uħ ġəʔala
 not-still=VER=3MED morning
 “It’s not morning yet.”
- b. ʔoxsemuħ ġanuʎa
 ʔwa=xse=ʔm=uħ ġanuʎ=a
 so=still=VER=3MED night=A
 “It’s still night.”
- c. ġanuʎcemuħ
 ġanuʎ-xse=ʔm=uħ
 night-still=VER=3MED
 “It’s still night.”
- (543) a. ʔox^wsemən naqa ʎa kafɪ
 ʔwa=xse=ʔm=n naqa ʎa kafɪ
 so=still=VER=1 drink ACC coffee
 “I still drink coffee.”
- b. naqaxsemən ʎa kafɪ
 naqa-xse=ʔm=n ʎa kafɪ
 drink-still=VER=1 ACC coffee
 “I still drink coffee.”

It is important to emphasize the difference between these “temporal exclusives” and the

“temporal exclusive” seen in §7.3.5. These temporal exclusives assert something about the predicate – that alternatives to it do not hold – over some span or spans of time, whereas *ʔal-* in §7.3.5 asserts something about the times themselves – that the sentence does not hold in any alternatives to the times specified.

7.3.5 *ʔal-*

ʔal=ʔm often means “just now”, “just recently”, or “only later” (544) – Boas (1905, p. 515) glosses it as “soon, recently”.

- (544) a. *ʔalʔəmλən*
ʔal=ʔm=λ=n
 late=VER=FUT=1
 “I’ll do it later.”
- b. *ʔalmən ǰʷaʔ naqa ǰa kafi*
ʔal=ʔm=n ǰʷaʔ naqa ǰa kafi
 late=VER=1 stop drink ACC coffee
 “I recently quit coffee.”
- c. *ʔalmən ʔiti kʷəmtida*
ʔal=ʔm=n ʔit-xʔid kʷmt-xʔida
 late=VER=1 again-CHANGE smoke-CHANGE
 “Recently I started smoking again.”

However, more generally it means “only at a particular time” for any particular time or timespan (545-547).

- (545) *ʔalʔəm niʔida dəxdəxəlulaxa ǰanuʔ*
ʔal=ʔm niʔ-xʔida dxdxluʔ=(a)ǰa ǰanuʔ
 late=VER show-CHANGE owl=ACC night
 “The owl only appears at night.” (Goodfellow et al., 1991, p. 55)

- (546) *ʔalmuǰ Pat ʔǰəla sa λətəml ləʔe la ǰa nəgeʔ*
ʔal=ʔm=uǰ Pat ʔǰ-la sa λt-(ǰ)m-l l=a=i la ǰa nk-_way
 late=VER=3MED Pat do-ONGOING OBL hat-face-wear PREP=a=3DIST PREP ACC mountain-NMZ
 “Pat just wears his hat when he goes to the mountain.” [rather than at other times]

(547) a. miḵi Dʒunuqʷa ḵʷa ṅala
 miḵ=i Dʒunuqʷa ḵʷa ṅala
 sleep=3DIST Dzunuqwa ACC.3MED day
 “The Wild Woman sleeps in the day.”

b. ʔaṁiṁis čəxʔi la ǰʷalida dʒaqʷaḵstala
 ʔaṁ=ʔm=is čx-xʔid la ǰʷaṁ=i=da dʒaqʷa-ḵst-ala
 late=VER=and wake-CHANGE PREP stop=3DIST=DET evening-mouth-ONGOING
 “She finally (lit: only) wakes up when supper’s over.”

(Cranmer and Janzen, 2014)

(548) *Context: Two people are trying to wake a sleeper, but fail and go home.*

ʔaṁʔəṁ λaʷiʔ ləʔe boxʷdaḵʷa,
 ʔaṁ=ʔm λaḵʷ=iʔ l=a=i bw=(a)xdaḵʷa,
 late=VER stand=3DIST PREP=a=3DIST leave=PL
 “She awoke only when they left.”

Examples like those in (545-548) make it clear that *ʔaṁ-* does not simply refer to “recently” or “soon”, but refers to “at particular times but not other times”. These times are often just-before-now – “at a recent time, but not further in the past” – but (545-548) shows that the times included, and the times excluded, could be anything.

7.3.5.1 Origin of *ʔaṁ-*

ʔaṁʔəṁ is based on a root *ʔaṁ-*, which in the absence of =*ʔm* appears to mean “be late”.

(549) *Context: Jon did not show up for our meeting at the appointed time.*

ʔaṁʔidi Jon
 ʔaṁ-xʔid=i Jon
 late-CHANGE=3DIST Jon
 “Jon was late.”

Some instances of *ʔaṁʔəṁ*, like (544a), might just be this basic “late” use, plus the contrastive *verum* use of =*ʔm*: saying that something is not true now, but will be true later.

7.3.5.2 Syntax of *ʔaṁ-*

ʔaṁ- appears to be an auxiliary; I have not encountered it other than in pre-predicative position.

In Boas/Hunt-era Kwak’wala, one can find instances of *ʔal-* that appear to use the same syntax as those above (550). However, many instances of *ʔal-* in Boas and Hunt (1905) are embedded into copular sentences with *he-*, the structure of which I do not fully understand (551).

- (550) wε, ʔaʔəmláʔe ġʷaʔ m̄əlaχs laʔe hiʔasġəm
wε, ʔaʔ=ʔm=ʔa=i ġʷaʔ m̄laχs la=i hiʔa-sġəm
well, late=VER=REPORT=3DIST finish make.rope PREP=EMBED=3DIST correct-CLASS
laχida la m̄ənyacida xʷakʷəna.
la=χ=i=da la mns-_was=i=da xʷakʷəna
PREP=ACC=3DIST=DET now measure-NMZ=3DIST=DET canoe
“She just finished making rope when it was the right length, the measure of the canoe.”
(Boas and Hunt, 1905, p. 78)

- (551) wε, heʔəmláwis ʔaʔ=is hiʔiʔa
wε, he=ʔm=ʔa=wis ʔaʔ=is hiʔiʔa
well, be.3DIST=VER=REPORT=and.so late=and.so? appear
qaʔs n̄axʔidiʔχs ləʔe λaxʷʔid
qa=ʔs n̄a-xʔid=iʔχ=s la=i λaxʷ-xʔid
for=3POSS ??-CHANGE=VIS?=3POSS PREP=3DIST stand-CHANGE
qaʔs le qasʔida
qa=ʔs la=i qas-xʔida
for=3POSS PREP=3DIST walk-CHANGE
“Just as daylight began to appear, he arose and started out.”
(Boas and Hunt, 1905, p. 27)

It may be that these correspond roughly to sentences like “It was just daybreak, when he arose and started out.” In general, though, it is difficult to determine which element is the associate in these sorts of “just as” contexts, because the “just as” relationship is logically symmetrical: if some event *X* happens just as another event *Y* happens, it is also true that event *Y* happens just as event *X* does.

7.3.6 Scalar interpretation

Above, I have presented exclusive operators as if they expressed the exclusion of *any* alternatives to the focus. However, this is not entirely the case, either in English or in Kwak’wala. Rather, exclusives only exclude some alternatives: those that would be higher on some con-

textually-relevant scale.¹⁴

7.3.6.1 Scales

For example, if I were to say (552a), this does not necessarily exclude me doing various other things like cleaning the kitchen, writing my dissertation, or eating and breathing; it probably only excludes me going out. If I were to say (552b), it does not exclude me having other properties – say, being happy, or talkative – but only excludes me being drunk.

- (552) a. “I just stayed home today.”
b. “I’m just tipsy.”

This would appear to be the case in Kwak’wala as well. For example, the speaker in (553) is offering advice, but is probably not saying “Do nothing but speak”; the only excluded alternative is “arguing”.

(553) *Context: The speaker is offering advice about language courses, which sometimes descend into squabbles about dialectal variations.*

- a. ḡ^wala ḡatapaḡ
ḡ^wala ḡata-pa=ḡ
stop fight-RECIP=HORT
“Stop arguing!”
- b. ḡoma yaqəntala suʔs yaqəndasuʔs
ḡwa=ḡm=a yaqnt-ka-la s=uʔs yaqnt-_was=uʔs
SO=VER=HORT speak-sound-ONGOING OBL=2POSS speak-PLACE=2POSS
“Just speak your own language.”

Rather, the interpretation of exclusives in English as well as Kwak’wala involves *scales* (cf. Beaver and Clark, 2008): rankings of alternatives such that higher alternatives on the scale are excluded, but other alternatives are not necessarily excluded. For example, if we were to say “George is only a duke”, we are denying that he is the king of somewhere, but are not necessarily excluding that he is also the baron or count of somewhere. If we were to say “The coffee is just hot”, we are denying that it is scorching, but not denying that it is warm.

- (554) a. “George is only a duke.”
b. baron < earl < duke < king

¹⁴To be more formally precise, higher on a partial ordering, although (Beaver and Clark, 2008, p. 258–260) argue further that the relevant scale need not even be a partial order, but a pre-order.

- (555) a. “The coffee is hot.” “Will it burn me if I drink some now?” “No, it’s just hot.”
 b. warm < hot < scorching

7.3.6.2 The need for scales

We can observe the relevance of scales like these to the interpretation of exclusive operators by observing that exclusives are “directional”: when we consider a scale like *tipsy* < *drunk*, the exclusive operator appears when asserting the lower option (*tipsy*) but not when asserting the higher option (*drunk*).¹⁵

(556) *Context: A son comes home from a party and encounters his mother.*

- a. wənaʎas
 wnaʎa=s
 drunk=2
 “You’re drunk!”
- b. ʔomən dusala
 ʔwa=ʔm=n dusala
 so=VER=1 tipsy
 “I’m just tipsy!”

(557) *Context: A son comes home from a party and encounters his mother.*

- a. o, dusalas
 o, dusala=s
 oh, tipsy=2
 “Oh, you’re tipsy.”
- b. ki, wənaʎən!
 ki, wnaʎ=n!
 no, drunk=1
 “No, I’m drunk.”

We can also observe the necessity of scales when considering sentences where the associate of the exclusive operator is of the form *X and Y*.

¹⁵The words *wənaʎa* and *dusala* originally meant something like “lost, disoriented” and “elated, on an emotional high”, respectively, but have taken on metaphorical meanings such as these.

(558) *Context: I had recently given up coffee.*

higamən la naqasəwida diy ləwida wəp
 higa=ʔm=n la naqa-sw=i=da diy ləw=i=da wəp
 only=VER=1 then drink-PASS=3DIST=DET tea with=3DIST=DET water
 “I only drink tea and water now.” (Lit: “Tea and water are the only things I drink now.”)

(559) *Context: The author is describing some of her first days in residential school.*

higaməsli Martha luʔ Pauline laʒada skul
 higa=ʔm=as=ʒ=i Martha ləw Pauline l=(a)ʒa=da skul
 only=VER=PRSNTV=FUT=3DIST Martha and Pauline PREP=ACC=DET school
 “There’s only Martha and Pauline at the school.” (Cranmer and Janzen, 2014)

(560) lixamīs q̣wəli Qomgila ləwīʔs mələukwī sasəma.
 lixa=ʔm=is q̣w=i Qomgila ləw=iʔs mʔl=ukw=e sasəma
 only=VER=AND live=3DIST Wealthy and=3POSS.REFL two=CLASS=INVIS child
 “Only Wealthy and his two sons survived.” (Boas and Hunt, 1905, p. 124)

The possible alternatives to *X and Y* would include *A, B*, etc., but they would also include *X and Y* themselves. That is, *tea* would technically be an alternative to *tea and water*, but “I only drink tea and water” should not deny “I drink tea”; it should only deny “I drink coffee”.

We therefore need a mechanism by which *tea and water* can exclude *coffee* but not *tea*. We do not, however, need an additional mechanism to ensure this; scales will suffice. *Tea* will always be “below” *tea and water* on a “parthood” (in the sense of Link, 1983) scale.

That is to say, consider all the possibilities of choosing subsets of {water, tea, coffee}: you could just choose {coffee}, or just choose {tea}, or choose {tea, coffee}, or choose {water, coffee}, etc. If we consider the relationship of subsethood between the possible subsets of {water, tea, coffee}, this is a scale (e.g., {tea} is a subset of {water, tea} is a subset of {water, tea, coffee}) of the appropriate sort. “I only drink tea and water” does not exclude “I drink tea” because {tea} is “less than” {tea, coffee} on a subsethood scale, just like *baron* is less than *earl* on an English nobility scale.

7.3.6.3 Various kinds of scales

What scales can be relevant to exclusive operators? As with English, it seems that a variety of scales can be relevant, depending on the context. These could be lexically-defined scales, Link-style parthood scales, culturally-defined scales, or even scales that exist only in the moment.

As mentioned in §7.3.4, *ʔo-*, especially, often appears with actions that are culturally or morally “lesser”, like just sitting there rather than doing something.

(561) *Context: A story in which a bunch of idle old men turn into dogs due to inactivity.*

a. *laʔe* *laʔes nuk^w* *ǰ^wigiləs nuk^w*
ləʔ=i *l-_was-nuk^w* *ǰ^wi-gi-l-_was-nuk^w*
 when=3DIST go-PLACE-have whatever-do-ONGOING-NMZ-have
 “When they [the wives] went somewhere to do something...”

b. *ʔoʔm lawis* *k^wesəsida* *q^wəlsq^wəlyak^w*
ʔwa=ʔm=a=wis *k^w-esəs=i=da* *q^wəls-q^wəls-_wak^w*
 so=VER=REPORT=and.so sit-??=3DIST=DET REDUP-old-NMZ
 “...the old people just sat around...”

c. *daduq^wa* *laǰ ǰis* *qu gaǰǰ* *nenək^w*
da-duq^w-_ha *la=ǰ=is* *qu gaǰ=ǰ* *nenək^w*
 REDUP-see-try PREP=ACC=3POSS.REFL for come=FUT go.home
 “...waiting for their wives to come home.” (Dick and Shaughnessy, 1977)

However, *ʔo-* should not be assumed to be negative or pejorative. Sometimes the option marked with *ʔo-* is the one the speaker prefers.

(562) *Context: In this story, the girls are trying to open some jam so they can eat it, and their mother catches them.*

kista *lawisida,* *ʔoʔəm* *ʔəǰstu* *qənuʔǰ^w* *ǰada* *d^zam qənuʔǰ^w*
kis=ta *lawis=i=da,* *ʔwa=ʔm* *ʔǰ-stu* *q=nuʔǰ^w* *ǰa=da* *d^zam q=nuʔǰ^w*
 not=but angry=3DIST=DET, so=VER do-eye for=1EXCL ACC=DET jam for=1EXCL
həmǰidaǰ
hm-xʔid=aǰ
 eat-CHANGE=ACC

“But she wasn’t angry, she just opened our can of jam so we could eat it.”

(Cranmer and Janzen, 2014)

(563) *Context: The conversation had drifted into English.*

ʔoʔəmλən bak^ˈwəm^ˈkala
 ʔwa=ʔm=λ=n bk^w-_{eh}m-(k)_ha-la
 so=VER=FUT=1 man-genuine-sound-ONGOING
 “Only speak Bak’wəmk’ala!” [instead of English]

As with English, the scale to which an exclusive operator is sensitive would have to depend on the context, and the scale that the context provides might indeed be unique to that context.

(564) *Context: The speakers are comparing two Find-the-Difference pictures. One picture has a picnic basket and a squirrel, the other has a picnic basket and a soft drink cup. The speaker with the soft drink cup exclaims...*

- a. oh, cicaniqəlabidu,
 oh, cý-can-_hiq-la=bidu
 oh, REDUP-cute?-in.self-ONGOING=DIMIN
 “Oh, cute!”
- b. ʔomən ʔəǰaǰa ǰa naqimas ǰa poʔp
 ʔwa=ʔm=n ʔǰ-aǰa ǰa naq-_himas ǰa poʔp
 so=VER=1 do-NMZ ACC drink-NMZ ACC pop
 “...I only got a cup of pop.”

The contextual scale invoked here – between a soft drink cup and a squirrel – is probably not any established lexical scale like “warm” vs. “hot” or a culturally established scale; it is presumably just a scale of desirability within this particular context, that having cuter or more interesting pictures is more desirable.

7.3.7 Negative exclusive sentences

The behavior of English exclusive operators when negated (e.g., “not only”) is a topic of much discussion (Horn, 1969; Atlas, 1991; Herburger, 2000; Beaver and Clark, 2008, e.g.). It has been observed at least since the medieval period that exclusive sentences have both positive and negative meaning components:

- (565) a. “I only convinced the LINGUISTS in Vancouver.”
 b. ⇒ *I convinced the linguists in Vancouver.*
 c. ⇒ *I did not convince anyone else in Vancouver.*

When negated, however, “only” sentences have an unusual result: one of the meanings (the negative component) is negated, and one of the meanings (the positive component) remains intact.

- (566) a. “I didn’t only convince the LINGUISTS in Vancouver...”
b. ⇒ *I convinced the linguists in Vancouver.*
c. ⇒ *I convinced someone else in Vancouver.*

The property of the positive meaning here, of being unaffected by negation, is called **projection** (Beaver et al., 2009); we speak of this meaning “projecting through negation”. However, we can also observe sentences in which the positive component would not have projected through negation, since the positive component would contradict other information in the context. (That is to say, we can observe sentences in which the positive meaning must be negated, as well, which we would not expect if the positive meaning was projective.)

- (567) a. “Lost Lake isn’t **just** an imaginary spot on an old government map. David Cripe, 92, is a lifelong area resident and clearly remembers a lake in the area...” (Chase Squires, “Lost lake found”, St. Petersburg Times, 7–12–1998, via Beaver and Clark, 2008, p. 236)
b. “The registered office address must be a street address, and not **merely** a post office box.” (Beaver and Clark, 2008, p. 236)

Which meanings are and are not (or can and cannot be) affected by negation – which meanings “project” – is crucial when considering how to implement “only” formally.

The question that arises, then, is whether Kwak’wala exclusives pattern like English, or whether they pattern in some other way that would require a non-English-like exclusive semantics. I do not have much data regarding this, but overall it seems as if English and Kwak’wala exclusives behave similarly under negation; that usually the positive component projects and the negative component is negated, but occasionally other readings are possible.¹⁶

For the most part, negated exclusive sentences appear to maintain their positive meaning component:

¹⁶I should note, however, that all of these instances are translations of English sentences. I mentioned in §1.8 that, when judgments of translated sentences are exactly the same as they would be in English, it does not necessarily constitute evidence that the Kwak’wala translation does indeed have the same meaning as the English sentence. It may be the case, and sometimes I think it is the case, that speakers are translating the sentence back into English and judging that. When judgments systematically *differ* from English judgments, then there is indeed evidence that the semantics differ, but when judgments are systematically *the same* as English judgments, then this is not necessarily evidence that the semantics is the same.

It is therefore better to say “I do not have reason to believe that Kwak’wala negative exclusive interpretation differs from English”, rather than “I have reason to believe that Kwak’wala negative exclusive interpretation does not differ from English.”

(568) *Context: Jon has fallen off a cliff and is hanging onto a small tree growing out of the side. One bystander claims that they are the only one who can help, but another person disagrees.*

a. higaṁən wɛl gəwəluʔs
 higa=ʔm=n wɛl gɔ̄-al=uʔs
 only=VER=1 can help-ONGOING=2POSS
 “I’m the only one who can help you.”

b. kʰiʔsuχ higaʔəm wɛl gəwəla loʔ
 kʰiʔs=uχ hig=ʔm wɛl gɔ̄-ala loʔ
 not=3MED only=VER can help-ONGOING ACC.2
 “He’s not the only one who can help you.”

c. wɛlṁən gəwəluʔs
 wɛl=ʔm=n gɔ̄-al=uʔs
 can=VER=1 help-ONGOING=2POSS
 “I can help you too.”

(569) kʰiʔs ʔoʔəm ʔamɬi ʃa guitar, dənɬəlaʔəmχəʔe.
 kʰiʔs ʔwa=ʔm ʔamɬ=i ʃa guitar, dnɬ-la=ʔm=ʃa=i
 not so=VER play=3DIST ACC guitar, sing-ONGOING=VER=ADD.FOC=3DIST
 “He doesn’t just play guitar, he also sings.”

(570) *Context: A tableau of brightly-colored wooden men and pigs is spread out on the table. Two men (one yellow, one red) are holding pigs.*

a. kʰiʔsuχ higaṁuχda lemənʔstuχ bəgʷanəm gʷəsunukʷa
 kʰiʔs=uχ higa=ʔm=uχ=da lemn-ʔstu=q bkʷ-wanm gʷsu-nukʷa
 not=3MED only=VER=3MED=DET lemon-eye=VIS man-person pig-have
 “The yellow man isn’t the only one with a pig.”

b. ʔugʷaqəṁuχda ʃaχʷʔstuχ bəgʷanəm gʷəsunukʷa
 ʔugʷaq=ʔm=uχ=da ʃaqʷ-ʔstu=q bkʷ-wanm gʷsu-nukʷa
 also=VER=3MED=DET red-eye=VIS man-person pig-have
 “The red man has a pig, too.”

The positive component of these sentences (*I can help you, He plays guitar, The yellow man has a pig*) survives negation; this is confirmed by the presence of the additive in the follow-up

sentences.

However, this is not always the case; sometimes the positive component is not retained. (571) could not mean “You should sit there and also walk around”; it has to mean “Don’t sit there; walk around instead.”

- (571) ḡ^wad^zos ʔoʔəm k^ˈwala la^ˈǰ^w, qasilela
ḡ^wa-d^zo=s ʔwa=ʔm k^ˈw-ala l=(a)ǰ^w, qas-*eh*yly-ala
stop-AUG=2 SO=VER sit-ONGOING.POS PREP=ACC.3MED, walk-back.and.forth-ONGOING
“Don’t just sit there, walk around!”

Furthermore, if the positive component were truly projective, we might expect it to be projective in contexts other than negation, like in modal sentences and *if*-clauses (cf. the “family of sentences” tests of Beaver et al., 2009). However, the positive meaning component of the following exclusive clauses, *Katie eats fish*, would contradict the context given. Since these sentences were accepted in this context, that suggests that *Katie eats fish* did not project in these sentences.

- (572) *Context: Katie is coming for dinner, and I remember that she is a picky eater and only eats one kind of animal protein, but I don’t remember which one, whether it’s fish, chicken, etc.*

- a. higa^xsʔəm həmeʔsida k^ˈutəla
hig=(a)^xs=ʔm hm-ay^ˈ=s=i=da k^ˈutla
only=MODAL=VER eat-NMZ=3POSS=3DIST=DET salmon
“*She might only eat fish.*”
- b. higaʔəmla^ˈǰ həməyʔeʔeda k^ˈutəla,
higa=ʔm=la^ˈǰ hm-ay^ˈ=a=i=da k^ˈutla,
only=VER=hyp eat-NMZ=EMBED=3DIST=DET salmon,
k^ˈis^ˈλənʔs hamixsila^ˈǰ ʔəld^ˈi
k^ˈiʔs=λ=nʔs hm-*e*i-xsi-la=^ˈǰ ʔls-*w*i
not=FUT=1INCL eat-NMZ-occupy-ONGOING=ACC fat-NMZ
“*If she only eats fish, we shouldn’t cook meat.*”

As noted above, these sentences do not necessarily show that Kwak’wala and English exclusives have the exact same semantics, but they do address an important question: Do we have reason to believe that the semantic behavior of the positive and negative components of exclusive sentences differs between languages? The sentences above suggest, at least, that Kwak’wala does *not* give us reason to believe that this is a matter of cross-linguistic variation.

7.3.8 Recap

Kwak’wala has three different exclusive operators, which vary according to which part of the sentence contains the associated focus:

- *hig-*, which requires that the associated focus be in the subject.
- *ʔo-*, which requires that the associated focus be in the predicate.
- *ʔaʔ-*, which requires that the associated focus be in a time adjunct.

A fourth operator, *lix-*, appears in Boas/Hunt-era texts, but seems to be a dialectal variant of *hig-* rather than a different operator.

Aside from these novel restrictions on association, Kwak’wala exclusive operators appear to be semantically similar to English exclusive operators.

7.4 Scalar operators

The Kwak’wala exclusive operators appear to be scalar – that is, the evaluation of their meaning would involve rankings of alternatives along some contextually-relevant scale (§7.3.6) – but there do not seem to be any operators similar to the scalar operator “even” in English. There are several operators that appear in “even”-like contexts, but none of them have the same range as “even”.

One of them is =*ǰa*, which I will argue in §7.4.1 is not itself scalar; the other is *ʔolaʔ* (§7.4.2), whose meaning is difficult to pin down but at least seems to involve a likelihood or noteworthiness scale similar to that of “even”.

7.4.1 The additive in scalar contexts

Many English sentences that would contain “even” are rendered with =*ǰa* in Kwak’wala, but it should be emphasized that this does not necessarily mean that =*ǰa* itself is scalar (cf. Koch and Zimmermann, 2010).

(573) *Context: In a storyboard, Heather’s husband is really cleaning up around the house.*

- a. *q̣inəmi* *çuc̣axsəẉeyes*
q̣inm=i *çu-çux^w-ṣwa=aʔ=es*
many=3_{DIST} REDUP-wash-PASS=INVIS=3_{POSS?}
“He washes lots of dishes.”

- b. $\check{x}ik^w a \text{?} \text{əm} \check{x} \text{ə} \text{?} e$ $\check{x}a \quad \acute{t} \text{ə} \acute{x} \acute{t} a \acute{g} i \acute{l}$
 $\check{x}ik^w a = \text{?} m = \check{x} a = i$ $\check{x}a \quad \acute{t} x - \acute{t} a k - \text{w} i \acute{l}$
sweep=VER=ADD.FOC=3DIST ACC REDUP-dirt-indoors
“He even sweeps the floor.” (Lit: “He sweeps the floor, **too**.”)

(574) *Context: Masaki’s brother is better than Masaki in many ways: he’s taller, has a bigger house...*

- a. $h \text{ə} n \acute{l} \text{?} i n u \check{x}^w i$ $\acute{n} u \acute{l} e \text{?} s u \check{x}$
 $h n \lambda - \text{h} i n u \check{x}^w = i$ $\acute{n} u \acute{l} a = a \text{?} = s = u \check{x}$
shoot-expert=3DIST older.sib=INVIS=3POSS=3MED
“His brother is a [better] hunter.”

- b. $\acute{w} a \acute{l} a s a \acute{g} a w e \text{?} \text{əm} \check{x} \text{ə} \text{?} e$ $k e \text{?} s$
 $\acute{w} a \acute{l} a s - a \acute{g} a w a \acute{y} = \text{?} m = \check{x} a = i$ $k a = a \text{?} = s$
big-more=VER=ADD.FOC=3DIST car=INVIS=3POSS
“He even has a bigger car.” (Lit: “He has a bigger car, **too**.”)

While these instances of = $\check{x}a$ are used in scalar contexts, a scalar context does not seem to be necessary for the use of = $\check{x}a$; there are many instances in this chapter where we have no reason to believe the antecedent and associate are intended to be compared on a scale. Moreover, many of these = $\check{x}a$ sentences would be strange, absurd, or impossible in English if translated with a scalar additive.

- (575) a. [Hannah wants a horse for Christmas and] ??“she even wants a dog.” (=477a)
b. ??“We’re not poor, but we’re even not rich/not even rich.” (=482)

It is also worth noting that = $\check{x}a$ does not appear in non-additive “even” contexts. For example, for sentences like “Even *Y* can do that!” (576) and “Not even *Y* can do that!” (577), = $\check{x}a$ does not occur, and a speaker even noted here that there was “no way to say ‘even’” in (576).

(576) *Context: We’re having a discussion about whether different people could manage to eat different sorts of animals, from smaller animals like chickens to large ones like cows. The speaker is remarking on the fact that Catherine can’t eat a whole chicken.*

- a. $\acute{k} i \text{?} s u \check{x}$ $\acute{w} e \acute{l} a, \lambda u m a \quad \acute{q} i n \text{ə} m$
 $\acute{k} i \text{?} s = u \check{x}$ $\acute{w} e \acute{l} a, \lambda u m a \quad \acute{q} i n m$
not=3MED can, very many
“She [Catherine] can’t [eat a chicken]! It’s too much.”

- b. wəlməʔi Ayoko həmxʔi ʃa qaʦoʔo
 wəl=ʔm=e=i Ayoko hm-xʔid ʃa qaʦoʔo
 can=VER=QUES?=3DIST Ayako eat-CHANGE ACC chicken
 “Even Ayako can eat a chicken!”

(577) *Context: The discussion continues, regarding the other end of the scale.*

- a. ʔəngʷida wəla həmap ʃa maʃʔinuʃʷ
 ʔngʷ=i=da wəl=a hm-ap ʃa maʃʔinuʃʷ
 who=3DIST=DET can=a eat-consume ACC orca
 “Who can eat an orca?”
- b. kiʔsuʃ Jon wəl həmap ʃa maʃʔinuʃʷ
 kiʔs=uʃ Jon wəl hm-ap ʃa maʃʔinuʃʷ
 not=3MED Jon can eat-consume ACC orca
 “Not even Jon can eat an orca.”

(578) *Context: We’re talking about an imaginary person who, for some reason, is only able to eat trees.*

- a. higəʔəm həmeʔsuʔseʔeda ʦʷaʃ
 hig=ʔm hm-ay-sw=s=ʔ=i=da ʦʷaʃ
 only=VER eat-NMZ-PASS=3POSS=EMBED=3DIST=DET tree
 “Trees are the only thing she can eat.”
- b. kiʔsuʃ ʔixʔak qəs həmeʔ ʃa ʦʷaʃ
 kiʔs=uʃ ʔixʔak q=s hm-ay ʃa ʦʷaʃ
 not=3MED like for=3POSS eat-NMZ ACC tree
 “She doesn’t even like to eat trees.”

Note that, in each of the contexts in (579), where =ʃa appears, the English additive is felicitous, but in each of the contexts in (580), where =ʃa fails to appear, the English additive is infelicitous:

- (579) a. “He washes dishes. He sweeps the floor, too!” (=573)
 b. “He’s a better hunter. He has a bigger car, too!” (=574)
- (580) a. “She can’t eat a chicken, it’s too much. #Ayako can eat a chicken, too!” (=576)
 b. “Who can eat an orca? #Jon can’t eat an orca, too/either!” (=577)

- c. “Trees are the only thing she can eat. #She doesn’t like trees, too/either!” (=578)

From these, we can see that =*ǰa* is not an “even”-type operator at all, even though it occurs in many “even” contexts; it simply happens that many “even” contexts are also ones where additives would be appropriate.

7.4.2 *ʔoɬat'*

There is another combination of morphemes that sometimes translates “even” contexts, *ʔoɬat'*. I have not managed to pin down exactly what it means, but I include it here for completeness.

In a negative sentence, it is somewhat similar to a scoffing “didn’t even” or “didn’t even manage to”.

- (581) *Context: Heather challenged her husband to a baking contest, but she is not trying very hard.*

- a. *nəm̩mi* *keʔgəsilasəw̩εʔs* Heather
n̩m=ʔm=i *keʔgs-gi-la-sw̩=a=aʔ=s* Heather
 one=VER=3DIST cake-do-ONGOING-PASS=a=INVIS=OBL Heather
 “Heather only made one cake.”

- b. *ʔiʔs ʔoɬat'* *kə'abudaǰ*
ʔiʔs ʔw=aɬ=at' *k-habw-d=(a)ǰ*
 not so=SURPRISE?=but put-under-CHANGE=ACC
 “She didn’t even bake it!”

In a positive sentence, it is very difficult to translate into English, but was described to me as “snarky” or “sarcastic” and was translated as something like “even came close” or “tried not even knowing what you were doing”.

- (582) *ʔoɬat'as* *kakiɬa*
ʔw=aɬ=t'as *ka-kiɬ-ʔa*
 SO-SURPRISE?=but=2 REDUP-net.fish-try
 “You tried to go fishing?” (Very roughly: “You even came close to fishing!”)

- (583) *Context: I have drawn a very poorly constructed cake, with layers falling off each other and dripping icing, and I ask whether the person who baked it could describe their accomplishment using (583a). The speaker agreed and improvised the responses in (583b-583c).*

- a. $\gamma\text{o}\lambda\text{at}\acute{\text{e}}\text{n}$ $\text{ke}\gamma\text{g}\acute{\text{e}}\text{s}\text{il}\text{a}!$
 $\gamma\text{w}=\text{a}\lambda=\text{at}=\text{n}$ $\text{ke}\gamma\text{gs-gi-la}!$
 so-SURPRSE?=but=1 cake-do-ONGOING
 Roughly: “I even came close to making a cake!”
- b. $\acute{\text{q}}\text{o}\lambda\acute{\text{e}}\text{m}\acute{\text{e}}\gamma\text{a}\text{q}\text{u}\gamma\text{s}$ $\gamma\text{i}\gamma\text{s}\text{a}\text{q}\text{u}\gamma\text{s}$ $\text{ke}\gamma\text{g}\acute{\text{e}}\text{s}\text{il}\text{a}\text{n}\acute{\text{e}}\gamma\text{o}\text{k}^{\text{w}}\text{a}$
 $\acute{\text{q}}\text{o}\lambda=\gamma\text{m}=\text{a}=\text{a}=\text{q}=\text{u}\gamma\text{s}$ $\gamma\text{i}\gamma\text{s}=\text{a}=\text{q}=\text{u}\gamma\text{s}$ $\text{ke}\gamma\text{gs-gi-la-n}\gamma\text{o}\text{k}^{\text{w}}\text{a}$
 know=VER=QUES?=a=VIS=2POSS not=a=VIS=2POSS cake-do-ONGOING-??
 “You know you can’t make a cake!”
- c. $\acute{\text{m}}\text{asi}$ $\text{lag}\text{i}\text{l}\acute{\text{e}}\gamma\text{o}\gamma\text{s}$ $\gamma\text{an}\acute{\text{e}}\text{neg}\text{il}\text{a}$ he
 $\acute{\text{m}}\text{as}=\text{i}$ $\text{la-gil}=\text{a}=\text{u}\gamma\text{s}$ $\gamma\text{n-}\gamma\text{n-ay-gi-la}$ he
 what=3DIST go-reason=INVIS=2POSS REDUP-mischief-NMZ-do-ONGOING be.3DIST
 $\check{\text{g}}^{\text{w}}\text{i}\text{x}\gamma\text{i}\text{d}\text{i}$
 $\check{\text{g}}^{\text{w}}\text{i-x}\gamma\text{id}=\text{i}$
 whatever-CHANGE=3DIST
 “Why would you do that?” (Lit: “Your reason for messing around like that is-what?”)

These are not additive contexts – it is not that I made something and in addition to that, made a cake – and $=\acute{\text{x}}\text{a}$ does not appear.

I think it might be reasonable to posit these are scalar contexts, however, given that they are built on the same root as the exclusive operator $\gamma\text{o}\gamma\text{am}$. I am not certain what kind of scale these might be, but it could be a likelihood (Karttunen and Peters, 1979; Rooth, 1985) or noteworthiness (Herburger, 2000) scale: that baking is the most likely or least noteworthy thing the subject could have done in (581), and that fishing or baking a cake is the least likely or most noteworthy thing the subject could have done in (582-583).

7.5 Formal semantics of focus operators

In their interpretation, the additive and exclusive operators of Kwak’wala do not appear to differ notably from their English counterparts, except in their restrictions, or lack of restrictions, on association. In this section, therefore, I will concentrate on these operators’ association behavior, rather than those phenomena (e.g. scalar interpretation and behavior under negation) that they share with English. This is because any solution to these shared phenomena that suffice for English will probably suffice for Kwak’wala as well, and the available evidence from English is abundant compared to the available evidence from Kwak’wala, which is fairly

tentative (cf. §7.3.7). On the other hand, the association data in Kwak’wala is quite robust; speakers’ judgments regarding possible focus associations are categorical and uniform.

7.5.1 Free association, fixed association, and opportunistic association

In general we can observe three focus association patterns in Kwak’wala: “fixed” association when the operator must associate with a particular constituent, “free” association when the operator can associate with any constituent, and “opportunistic” association when the operator must associate with whatever constituent is focus-marked by other means (e.g. by a nominal predicate construction).¹⁷

- Additive operators ($=\check{x}a$, $\lambda ug^{w}aq-$) exhibit free association: any element in the sentence can be the associated focus (§7.2.3). However, additive operators are also “opportunistic”, in that a marked focus will generally be interpreted as the associated focus (§7.2.4).
- Exclusive operators ($hig-$, $\lambda o-$, $\lambda a\check{l}-$) exhibit fixed association, in that their associated focus must be within a specific constituent, although within that constituent any element might be the focus (§7.3.2.3, §7.3.4.3). That is, the associated focus is “fixed” to be within a specific constituent, but is “free” within that constituent.

In §7.2.4 and §7.5.3.2, I suggest that opportunistic association is just a consequence of AVOIDF: “Do not focus things for no reason”.

The “fixed” and “free” association patterns, however, require some further consideration. To this end, it should be emphasized that “fixed” and “free” are not mutually exclusive: it is not as though exclusives are “fixed” in contrast to the “free” additives. Rather, exclusive and additive foci are “free” in different domains: exclusive foci are free only within a restricted syntactic constituent, whereas additive foci are free anywhere.

We do not, therefore, have to treat exclusive and additive association as utilizing different or incompatible mechanisms. The question is not “Does this operator associate in a fixed or free manner?” but “In what syntactic constituent is association free?” The different operators have different answers to this question: $hig-$, the subject; $\lambda o-$, the predicate; $\lambda a\check{l}-$, the temporal adjunct; $=\check{x}a$ and $\lambda ug^{w}aq-$, the entire clause. That is to say, $=\check{x}a$ and $\lambda ug^{w}aq-$ do not need to use different association mechanisms from the other operators; it is just that they are the trivial case of “fixed” association.

¹⁷This free/fixed/opportunistic typology is only intended to be descriptive; it is not given any theoretical reality in the discussion that follows. All three of these patterns are treated as consequences of other factors.

7.5.2 Two association mechanisms

In §5.6, I discussed two focus association mechanisms:

- The “non-syntactic” mechanism, in which an operator SAY has access to the focus by a Kratzer-style (1991) binding mechanism and constrains the questions-under-discussion variable *C* to a particular form.
- The “syntactic” mechanism, by which a phrase containing the focus serves as an argument (either directly or via movement) to an operator like “only”.

It is not that some operators make use of one of these mechanisms and other operators make use of the other; I assume all focus association makes use of both (cf. Krifka, 2006), although in many sentences, one or the other of these mechanisms performs an entirely trivial role.

Neither of these mechanisms would be fully adequate on its own to describe Kwak’wala association. For example, in §5.6.2 we saw that some English foci would be unable to move to be syntactic arguments of their operators; this would be a much more serious problem in Kwak’wala given its limitations on movement. It is not just foci within syntactic islands that would be ineligible for movement; *most* constituents in Kwak’wala are ineligible for movement (§B.1.2), like the objects in (584) and (585).

(584) *Context: The speaker is telling a story of a trip to the big city, in her father’s day.*

ʔoʔəm	haləqa	sa	g ^w ada	qəʔeʔs	k ^w əlilas
ʔwa=ʔm	haləqa	sa	g ^w ada	qa=iʔs	k ^w l-wi _w -as
SO=VER	pay	OBL	quarter	for=3POSS.REFL	lie-indoors-PLACE
“He only paid a quarter for his hotel.”					

(=535)

(585) *Context: After a series of drawings depicting bug-hunting, the children’s nets contain butterflies and no other insects.*

ʔomida	gəngənanəm	liʔloł	ǰa	həmumu
ʔwa=ʔm=i=da	gn-gn-wanm	ly-loł	ǰa	hmumu
SO=VER=3DIST=DET	REDUP-young-person	REDUP-get	ACC	butterfly
“The kids only caught butterflies .”				
Speaker comment: “Nothing else, just butterflies.”				

(=539a)

The sentence in (584) almost certainly does not mean “He paid a quarter for his hotel and did not do anything else”; it means “His hotel cost a quarter, and no more.” Likewise, the speaker’s comment regarding (585) reinforces that this sentence does not just mean “The only

action that the children did was catch butterflies”, but “The only things that the children caught were butterflies”. Constructing these narrower meanings, however, would be problematic if the *only* mechanism by which ʔoʔəm can access its associated focus is by movement, since we do not otherwise observe movements of objects in Kwak’wala. There is not, I think, a reasonable derivation of this sentence in which *sa gʷada* or *ǰa hāmumu* are either direct surface arguments of ʔoʔəm or move to become arguments of ʔoʔəm . This would require positing a kind of movement that we do not otherwise observe; this is a possible account, but given a non-syntactic association mechanism it is not necessary to posit this here.

Meanwhile, however, if the non-syntactic mechanism in this model were the only association mechanism, we would predict that focus association would always be entirely free. Consider, for example, the sentence in (586). As established in §7.3.4.3, this means “Ben sang and did not do anything else”; it does not mean “Ben is the only one who sang”.

- (586) ʔoʔəm dənǰəli Ben...
 ʔwa=ʔm dnǰ-l=i Ben
 so=VER sing-ONGOING=3DIST Ben
 “Ben just sang...” (=533a)

If the non-syntactic mechanism were the only means by which association is achieved, however, we would be unable to rule out the latter meaning. The inappropriate binding in (587b) would be just as possible as the appropriate binding in (587a).

- (587) a. $\text{SAY}_1(\text{ʔoʔəm } \text{dənǰəl}_{F_1} =i \text{ Ben})$
 b. $\text{SAY}_1(\text{ʔoʔəm } \text{dənǰəl} [=i \text{ Ben}]_{F_1})$

Altogether, the syntactic mechanism alone would predict inadequate freedom of association, while the non-syntactic mechanism would predict too much freedom of association. Together, however, these mechanisms can predict the limited amount of freedom of association that we actually observe.

7.5.3 Formal semantics of Kwak’wala additive operators

7.5.3.1 Additives associating freely

I will begin by implementing the operation of the additive operators $=ǰa$ and ʔugʷaq- . Since in these sentences the “focus phrase” would be the entire preadjacent sentence, there is no apparent effect of the syntactic mechanism and we can observe the effect of the non-syntactic mechanism alone.

My semantics for additive $=\check{x}a$ is as follows¹⁸:

(588) If $\alpha = [\check{x}a \beta]$, then

$$\llbracket \alpha \rrbracket^{g,w,C} \stackrel{df}{=} \begin{cases} \llbracket \beta \rrbracket^{g,w,C}, & \text{if } \exists p \in \bigcup C [p(w) = 1 \wedge \llbracket \beta \rrbracket^{g,w,C} \not\equiv p] \\ \text{undefined,} & \text{otherwise} \end{cases}$$

All this says is that $=\check{x}a$ presupposes that another proposition – one not entailed by the prejacent (Beaver and Clark, 2008, p. 73) – in $\bigcup C$ is true. However, it is not as though absolutely any proposition might suffice here; this set is still constrained by focus. $=\check{x}a$ does not have direct access to the focus variable, but rather gets its alternatives from C , which is constrained by SAY, which *does* bind the focus variable.

Consider, as an example, the sentence in (473d), meaning “I also bought flowers for my MOTHER.”

(589) SAY₁ ($=\check{x}a$ ($k\acute{e}lx^w\acute{e}n \check{x}a \ p\acute{e}lawas \ q\acute{e}\acute{z}\acute{e}n \ \acute{z}\acute{e}b\acute{e}mp_1$))
 SAY₁ (also (buy.I ACC flowers for.my mother₁))

In this sentence, SAY puts a particular constraint on $\bigcup C$, that it is of the form $\{\lambda w.that I \text{ bought flowers for } x \text{ in } w \mid x \in D_e\}$, and then $\check{x}a$ puts an additional constraint on the discourse that one of these alternatives is true, but not entailed by the prejacent.¹⁹ So for (589), the alternatives might be those in (590); $=\check{x}a$ presupposes that one of these alternatives is true other than $\lambda w.that I \text{ bought flowers for my mother in } w$.

¹⁸In this definition, I reintroduce the world variable w – which I usually suppress for brevity – because, unlike SAY, $=\check{x}a$ makes claims about the world and not just the conversation.

I am not certain of the exact definition of $\acute{z}ug^w\acute{a}q-$, because I do not completely understand its syntactic distribution and therefore what its syntactic arguments might be. $=\check{x}a$ we can reasonably assume is high in the structure and thus takes the entire sentence as its argument, with the possible exception of some other enclitics like $=\acute{z}m$, but $\acute{z}ug^w\acute{a}q-$ occurs in a variety of syntactic environments. In any case, I do not yet have reason to believe, at least so far as its pragmatics are concerned, that it differs substantially from $=\check{x}a$.

¹⁹Heim (1992, p. 215), Rullmann (2003, p. 335), and Kripke (2009) note that a purely existential semantics – where the presupposition is just that a true alternative exists – is insufficiently strong to capture the use of additives. Rather, there is some manner of anaphoric constraint on additives as well, such that the alternative need not merely be true but also must have been, in some way, mentioned. We might, then, add to the additive the presupposition that C contains the singleton set containing the antecedent alternative.

In §8.7.2, however, I suggest (following Krifka, 1998; Rullmann, 2003) that it may not be the antecedent alternative that “also P ” is sensitive to, but the implicature of $\neg P$ that arises from the antecedent alternative. Instead of presupposing that the singleton set containing antecedent answer is in C , we could presuppose that the negation of the antecedent is. This does not exactly match the conditions for additives, but the necessary additional constraint – that an implicature arises as a *particular* kind of implicature – is beyond the expressive capabilities of the current formalism.

$$(590) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that \ I \ bought \ flowers \ for \ my \ mother \ in \ w \\ \lambda w.that \ I \ bought \ flowers \ for \ Sarah \ in \ w \\ \lambda w.that \ I \ bought \ flowers \ for \ Ruby \ in \ w \\ \dots \end{array} \right\} \right\}$$

7.5.3.2 Additives associating opportunistically

In §7.2.4, we saw that the association of additive = $\acute{x}a$ is, in a way, “opportunistic”: while it does not require a focus to be marked, it appears to associate with a marked focus if one exists (cf. Koch and Zimmermann, 2010). I noted, however, that this appears to be non-obligatory, and suggested a pragmatic account for the rejection of sentences like (591). We can make that more explicit using the formal model presented in Chapter 5.

(591)	\acute{x}	$\acute{w}a\acute{c}i\acute{?}am\acute{x}e\acute{?}e$	$\acute{?}\acute{a}\acute{x}\acute{?}e\acute{x}sd\acute{a}s\acute{a}\acute{w}\acute{e}\acute{?}s$	Ayako
		$\acute{w}a\acute{c}i=\acute{?}m=\acute{x}a=i$	$\acute{?}\acute{x}-\acute{?}e\acute{x}sd-s\acute{w}=\acute{e}\acute{?}=s$	Ayako
		dog-NMZ=ver=ADD.FOC=3PROX	do-want-PASS=INVIS=3POSS	Ayako
		[Hannah wants a dog and] “Ayako _F also wants a dog.”		(=478b)

In this sentence, *Ayako* must be a focus, in order to get the appropriate additive interpretation. However, $\acute{w}a\acute{c}i$ must also be a focus, due to the nominal predicate construction (§6.5.2). The resulting meta-presupposition about C would be that $\bigcup C$ is a subset of $\{\lambda w.that \ x \ wants \ a \ y \ in \ w \mid x \in D_e, y \in D_{et}\}$. Furthermore, as a consequence of the AVOIDF principle (§5.3.2.3), this should be the most restrictive superset that we can specify. So, as a consequence of the meta-presupposition of (591) and AVOIDF, the speaker presupposes that there are relevant alternatives to “dog” in the immediate discourse. This was not, however, necessarily the case; while the overall topic of conversation was about Christmas gifts, the relevant question (like “What do Hannah and Ayako want for Christmas?”) had not actually occurred. I think the listener *could* have accommodated this sort of question – given what the overall discussion was about, it would not have been an unreasonable accommodation – but happened to reject it instead.

However, when the context was made more explicit – when the question was more clearly something like “What do Pat and Sarah want for Christmas?” – a structurally equivalent sentence was accepted. This suggests that the speaker was not rejecting (591) because the additive associates with something other than the marked focus; (592) has this property too. Rather, this suggests that what the speaker was rejecting in (591) was that $\acute{w}a\acute{c}i$ was focused in violation of AVOIDF.

- (592) $\dot{q}\acute{a}s\dot{?}\acute{o}ne\dot{?}\acute{o}m\acute{x}e\dot{?}e$ $\dot{?}\acute{x}\dot{?}\acute{e}\acute{x}s\acute{d}\acute{o}s\acute{o}w\acute{e}\dot{?}s$ **Sarah**
 $\dot{q}\acute{s}-k_n n-\acute{a}\dot{y}'=\dot{?}m=\acute{x}a=i$ $\dot{?}\acute{x}-\dot{?}\acute{e}\acute{x}s\acute{d}-s\acute{w}'=a=a\dot{?}=s$ **Sarah**
shirt-body-NMZ=VER=ADD.FOC=3DIST **do-want-PASS=a=INVIS=3POSS** **Sarah**
 [Pat wants a shirt and] “**Sarah** also wants a **shirt**.” (=479b)

Therefore, I do not treat “opportunistic” association as a distinct type of focus association; it is just a consequence of independent pragmatic principles. We observe it with additive operators not because additive operators exhibit a special type of association, but because additive operators, unlike exclusive operators, have as their focus phrase the entire clause, and can thus attach to clauses (like nominal predicate constructions and clefts) that already have marked foci.

7.5.4 Formal semantics of Kwak’wala exclusive operators

I will now move on to exclusive operators, for which we can observe the operation of both mechanisms of association.

7.5.4.1 The interaction of the syntactic and non-syntactic mechanism

Consider again the sentence in (593), in which the location of focus is partially fixed by the presence of $\dot{?}o-$ – it must be within the predicate – but also partially free, in that any subconstituent of the predicate could be the focus. It is only sentences like these – ones in which the location of focus is partially fixed and partially free – that both mechanisms operate non-trivially and thus can be observed.

- (593) $\dot{?}o\acute{m}ida$ $g\acute{a}ng\acute{a}nan\acute{o}m$ $li\dot{?}lo\acute{t}$ $\acute{x}a$ $h\acute{o}mumu$
 $\dot{?}o=\dot{?}m=i=da$ $gn-gn-w\acute{a}nm$ $l\acute{y}'-lo\acute{\lambda}$ $\acute{x}a$ $hmumu$
so=VER=3DIST=DET **REDUP-young-person** **REDUP-get** **ACC** **butterfly**
 “The kids **only** caught butterflies.” (=539a)

Assume, for clarity of exposition, that each exclusive operator has two arguments: in the case of $\dot{?}o-$, the subject and predicate, in the case of $hig-$, the subject and the copular complement, and in the case of $\dot{?}at-$, the temporal adjunct and the rest of the sentence. (It may be that these have more than these arguments, but two would be sufficient for our purposes here.) Also assume, again for clarity of exposition, that such arguments are direct, base-generated arguments, so that, for example, $\dot{?}o-$ in (593) would at generation intervene directly between the subject and predicate.

- (594) [$=i=da$ $g\acute{a}ng\acute{a}nan\acute{o}m$ [$\dot{?}o-$ [$li\dot{?}lo\acute{t}$ $\acute{x}a$ $h\acute{o}mumu$]]]

SAY binds *həmumu*, leading to the congruence meta-presupposition that all considerations in C are of the form $\{\lambda w.that\ the\ children\ caught\ x\ in\ w\ | \ x \in D_e\}$.²⁰

(595) [SAY₁ [=i=da *gəngənanəm* [*ʔo-* [*liʔloʔ ʃa həmumu_{F1}*]]]]

This constrains C to be something like the following, assuming that the contextually relevant catchables were {butterflies, dragonflies, bees}.

$$(596) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that\ the\ children\ caught\ butterflies\ in\ w \\ \lambda w.that\ the\ children\ caught\ dragonflies\ in\ w \\ \lambda w.that\ the\ children\ caught\ bees\ in\ w \end{array} \right\} \right\}$$

The exclusive operator, then, asserts that the children caught butterflies while quantifying over these propositions – the members of $\bigcup C$ – to deny those that are not *λw.that the children caught butterflies in w*.

However, it is not just denying that *any* member of $\bigcup C$ is true, because if this were the case, exclusives would exhibit free association. That is, if SAY-binding were the only thing determining the domain of quantification, then it would be possible to have (593) mean “Only the children caught butterflies” by having SAY bind *gəngənanəm* (“children”) instead.

So *ʔo-* must constrain this set further, specifically to alternatives that vary from the prejacent only in the predicate. That is to say, we can observe that *ʔo-* denies alternatives when those alternatives vary according to an element in the predicate, but it does not specify where in the predicate that varying element occurs. The superset of all the various alternative sets of which (593) can exclude members is $\{\lambda w.that\ the\ children\ did\ x\ in\ w\ | \ x \in D_{et}\}$; this is the set to which *ʔo-* needs to restrict its quantification, the one created by replacing its internal argument with a variable.

The denotation of *ʔo-* would thus be something like this:

$$(597) \quad \text{If } \alpha = [\beta [\textit{ʔo} \gamma]], \text{ then}$$

$$\llbracket \alpha \rrbracket^{g,w,C} \stackrel{df}{=} \llbracket \gamma \rrbracket^{g,w,C} (\llbracket \beta \rrbracket^{g,w,C}) \wedge$$

$$\forall f \in D_{\langle e,st \rangle} [f(\llbracket \beta \rrbracket^{g,w,C}) \in \bigcup C \rightarrow f(\llbracket \beta \rrbracket^{g,w,C})(w) = 1 \rightarrow f \preceq \llbracket \gamma \rrbracket^{g,w,C}]$$

Broken down, this definition first asserts its prejacent $\llbracket \gamma \rrbracket^{g,w,C} (\llbracket \beta \rrbracket^{g,w,C})$; like most contemporary work on exclusives I take exclusives to assert the *conjunction* of their positive and negative components (Atlas, 1991; Rooth, 1992; Herburger, 2000; Horn, 2002) rather than asserting the negative component and presupposing the positive component (Horn, 1969; Roberts,

²⁰Actually, to be precise, the presupposed question form would be more complicated than this; this would be the presupposed question form for the *prejacent*, non-exclusive sentence, not the exclusive sentence that contains *ʔo-*. I will treat exclusives here as presupposing the simpler question, and consider what this more complicated question might be in §7.5.4.3 and §8.7.3.1.

2006). If I were to presuppose the prejacent here rather than assert it, I would mispredict the possible meanings of some of the negative exclusive sentences in §7.3.7.

This definition then quantifies over functions f of type $\langle e, st \rangle$ – those corresponding to “catching butterflies”, “catching dragonflies”, “catching bees”, “breathing”, “watching television”, etc. – and asserts that, if $f(\llbracket \beta \rrbracket^{g,w,C})$ is in C , then either f does not hold of $\llbracket \beta \rrbracket^{g,w,C}$ (“the children”) or f is equal to or less than $\llbracket \gamma \rrbracket^{g,w,C}$ (“catching butterflies”) along a contextually-relevant scale²¹.

It should be emphasized that, like the additive definition in §7.5.3, this definition does not make use of the index of the focus: $\lambda o-$ does not bind i in (595) and so its definition cannot make reference to it. The resolution of the quantified set is done indirectly: the location of the focus constrains $\bigcup C$ through SAY, constraining it to propositions of the form $\{\lambda w.that\ the\ children\ chased\ x\ in\ w \mid x \in D_e\}$. The domain of $\lambda o-$ is the set of functions f such that $\lambda w.that\ the\ children\ did\ f\ in\ w$ are in $\bigcup C$; in this C , all such functions are of the form $\lambda x.\lambda w.that\ chased\ x\ in\ w$. $\lambda o-$ can therefore quantify over the appropriate set of functions without having direct access to the focus index.

hig- and $\lambda at-$ would have largely similar definitions, differing only in which argument is treated as variable when considering what subset of $\bigcup C$ to quantify over.

7.5.4.2 Focus and movement

In §7.5.4.1, I made a simplifying assumption, that the arguments of each of these operators were direct – that is, generated as their arguments – so that *hig-*, $\lambda o-$, and $\lambda at-$ themselves occupy a structural position that intervenes between their arguments.

Given that *hig-* has the syntax of a copula (§7.3.2.2) and this is what I assume of copulas in Chapter 4 – that is, after all, what “copula” means – this assumption is unproblematic for *hig-*. Meanwhile, while I know relatively little about the syntactic possibilities for $\lambda at-$, I do not have data that would contradict this.

However, $\lambda o-$, at least, raises some problems for this assumption; $\lambda o-$ appears to be an auxiliary and this is not, in §B.6.1.2, the syntax I assume of auxiliaries. Rather, I assume of auxiliaries a syntax roughly like the following, wherein the subject is, at an earlier stage of derivation, the subject of the main predicate (from whatever derivational path it took to get there) and then raises to become the structural subject of the auxiliary (before the auxiliary moves to initial position).

²¹The scale would need to be contextually specified by some means (e.g., in the manner of Beaver and Clark, 2008), but for simplicity I will just represent this relationship with \preceq .

(598) [SUBJ_i [ρo - [t_i [V (O)]]]]

I posited a structure like (598) in order to account for cases in which the subject has *not* moved to be the auxiliary subject, like in (599).

(599) $\rho o\rho am$ $d\acute{a}n\check{x}\acute{a}li$ Ben...

“Ben just sang...”

(=533a)

This problem is clearer in sentences with full objects. Of (599), we could potentially say that this has a structure similar to a copular sentence, something like [[ρo - $d\acute{a}n\check{x}\acute{a}l$] =i Ben], but in sentences like (600) and (601) where the subject appears to be inside a lower constituent, it would be difficult to claim that the subject and this constituent were surface arguments to ρo - to the exclusion of each other.²²

(600) $\acute{k}i?s$ $\rho o\rho am$ [$\rho am\acute{t}i$ $\check{x}a$ guitar]

$\acute{k}i?s$ $\rho wa=\rho m$ $\rho am\acute{t}=i$ $\check{x}a$ guitar

not so=VER play=3DIST ACC guitar

“He doesn’t just play guitar...” [he also sings]

(601) $\rho o\rho am$ [$hi\acute{t}\acute{q}ol\acute{e}mida$ $g\acute{a}ng\acute{a}nan\acute{a}m$ $la\check{x}a$ $\acute{q}ax^wa$]

$\rho wa=\rho m$ $hi\acute{t}\acute{q}olm=i=da$ $gn-gn-wanm$ $la=\check{x}a$ $\acute{q}ax^wa$

so=VER correct-??=3DIST=DET REDUP-young-person PREP=ACC shallow

“Kids are only allowed in the shallow end.”

It may be, of course, that the structure in (598) is not the appropriate one, but the larger point here is that whatever we assume about the structural relationship between ρo -, the subject, and the predicate, there will not be a consistent structure that will account for all of the different orders above *and* allow the subject and predicate to be separate surface arguments to ρo -. So we have to conclude that ρo - can get its arguments – that is, get the appropriate subject/predicate partition it needs for its interpretation – via movement.

It is not at all unusual to invoke movement as one of the means by which focus interpretation is achieved; it remains a standard assumption in the syntax of focus in various languages (e.g. Brody, 1990; Rizzi, 1997), and there are various arguments for its relevance in languages like English where the movement of focus phrases is not so obvious (Drubig, 1994; Wagner, 2006; Krifka, 2006).

However, what is notable about ρo - is not that its focus phrase moves to become its subject. The subject moves – except possibly under special circumstances (§4.4), the subject is the only

²²These sentences are actually somewhat difficult to find; it is usually the case that full VSO ρo - sentences that the subject appears next to ρo - – that is, in its “moved” position – rather than between the V and the O.

constituent we expect to move – but the focus phrase of $\rho o-$ is the predicate. That is to say, the focus phrase of $\rho o-$ would not be what moves, but the property that is *left behind* by movement. This puts a different light on the relationship of association and movement: that it might not be that associates have to move, but that focus operators make use of the sentential partitions that movement creates.

7.5.4.3 The congruence of exclusives

As mentioned briefly in §7.5.4.1, I also committed some rhetorical sleight-of-hand for expository purposes when treating the congruence presupposition of an exclusive sentence as if it were that of the prejacent sentence. That is, I treated $\rho o m i d a \ g a n g a n a n a m \ l i \rho l o t \ x a \ h a m u m u$ (“The children only caught butterflies”) as if it meta-presupposed that $\bigcup C$ was of the form $\{\lambda w.that\ the\ children\ caught\ x\ in\ w \mid x \in D_e\}$. This is not, however, the actual F-closure that we would predict; this would be the F-closure of the prejacent sentence $l i \rho l o \lambda i d a \ g a n g a n a n a m \ x a \ h a m u m u$ (“The children caught butterflies”).

In theories of focus in which we can potentially define focus semantic values of expressions separately from ordinary semantic values (e.g. Rooth, 1985; Kratzer, 1991), it would be possible to define $\rho o-$ so that its focus semantic value is the focus semantic value the prejacent would have. That is, we could define $\rho o-$ if it were “transparent” so far as the congruence calculation is concerned, so that “The children only caught butterflies” has the same congruence presupposition as “The children caught butterflies”.

I do not do this – the model I adopted and the assumptions I made do not, in fact, allow me to. A Wold-style (1996) focus semantics does not allow the definition of special focus semantic values except when the element in question binds the focus. Ordinary and focus semantic values are differentiated only by considering whether the assignment function g contains the index i ; if the operator does not “know about” i then there is nothing that it can differentiate. However, my focus operators do not bind their foci – their “associated” foci are already bound by SAY, and re-binding them would lead to quantification into an already-defined index (Heim, 1988; Wold, 1996).

I am therefore, like Roberts (2012), required to give “The children only caught butterflies” a more complex F-closure than “The children caught butterflies”, and therefore say that the former answers a more complex question than the latter. Fortunately, I think this is the case, and that Kwak’wala provides some evidence for what this question is: just as “The children only caught butterflies” is (or at least functions similarly to) the conjunction of a positive and negative answer (the children caught butterflies, the children did not catch anything else), it answers a question that is (or at least functions similarly to) the conjunction of a positive and

negative question (what did the children catch, what did the children not catch). I will return to this in §8.7 when considering the role that “complex questions” like this play in discourse.

7.5.4.4 How do exclusive operators “mark” focus?

Throughout this work, I have not maintained that there exists any one particular phenomenon that is “focus marking”; various expressive phenomena can indicate to the listener what elements are foci, and they do not necessarily do so by the same means. In §1.7, I note that focus operators themselves are a means by which focus location can be narrowed down, like how in English the location of a focus can be at least narrowed down (although not always uniquely identified) by the syntactic position of “only”, even in the absence of intonational cues.

In Kwak’wala, this sort of “marking by operators” is one of the more frequent kinds of signals by which the location of focus is narrowed down. While clefts are reasonably frequent in dialogue, neither clefts nor nominal predicate constructions are particularly frequent in texts like Boas and Hunt (1905), whereas $\lambda o-$ is very common. It is worth considering in more detail, then, how exactly an operator like $\lambda o-$ in (602) allows the deduction of the location of focus to be somewhere within *li?lo? ʔa həmumu*.

(602) *ʔomida gəngənanəm li?lo? ʔa həmumu*
 “The kids only **caught butterflies**.” (=539a)

Although I refer to the associated argument of a focus operator as a “focus phrase”, this is just a label for “the argument of an operator with a focus in it”; I have not yet posited an actual mechanism to require this containment relationship. What could require a focus phrase to contain a focus?

To answer this, let us consider for a moment what $\lambda o-$ is quantifying over. Nothing in the definitions of $\lambda o-$ or SAY, nor anything about their interaction, forbids the domain of quantification from just being a singleton set, like $\{\lambda w.\textit{that the children caught butterflies in } w\}$. That is to say, nothing in the definitions above actually require that an exclusive have a proposition to deny.

We could add such a requirement, by (for example) presupposing the existence of a property z such that z is not equal to or less than $\llbracket \gamma \rrbracket^{g,C}$ and $z(\llbracket \beta \rrbracket^{g,C})$ is in $\bigcup C$, but this may not actually be necessary. Meta-implicature may be enough here. Universal quantification implicates that the restrictor set is non-trivial; if we say “Every boy graduated” rather than, say, “The boy graduated”, then this implicates that there exists more than one boy. The exclusive operator above is a universal quantifier whose domain is provided by C – it is the members of $\bigcup C$ that are of a particular form – and thus would implicate that this set contains more propositions

than the prejacent, and therefore that $\bigcup C$ contains more propositions than the prejacent. If there were *not* such additional propositions, the contribution of the exclusive would be a trivial addition to the sentence: the meaning of an λo - sentence would just be “The prejacent is true, and if the prejacent is true then its predicate is equal to its predicate”.

This implicature provides the means by which listeners can narrow down the location of focus to the predicate. First, the presence of λo - implicates, by the maxim of Manner (Grice, 1989), that its contribution to the sentence is non-trivial.²³ In order for λo - to be non-trivial, $\bigcup C$ must contain at least one proposition of the form $\{\lambda w.that\ the\ children\ did\ x\ in\ w\ | x \in D_{et}\}$ besides the prejacent. If there are two non-identical propositions of the form $\lambda w.that\ the\ children\ did\ x\ in\ w$ in $\bigcup C$, then there must be at least one F-variable in the sentence, and it must be in the predicate, or else the congruence meta-presupposition of SAY would fail.

Therefore, the presence of λo - allows the listener to deduce that there is a focus in the predicate. If there is not, either the manner meta-implicature of λo - fails (because the contribution of λo - becomes trivial) or the meta-presupposition of SAY fails (because the F-closure of the sentence would not be a superset of $\bigcup C$). A similar deduction would be possible for the other exclusive operators, as well, that there exists a focus within their respective “focus phrases” (for *hig*-, the subject; for *lat*-, the temporal adjunct). On the other hand, while the same deduction would be possible for the additive operators, it would not give the listener any information about the location of focus; it would merely allow the listener to deduce “This sentence has a focus somewhere.” Exclusive operators are therefore “markers” of focus in Kwak’wala in a way that additive operators are not.

7.6 Summary

In this chapter, I investigated Kwak’wala’s equivalents of English focus operators like “only”, “also”, and “even”. It is unclear whether there is any close equivalent to “even” – there is a sequence of morphemes $\lambda\lambda a'$ that at least seems that it might operate on an “even”-like likelihood scale – but equivalents of “only” and “also” are abundant and have interesting properties with respect to association-with-focus.

Kwak’wala has two basic additive operators, the second position enclitic $=\check{x}a$ and the mobile auxiliary λug^{aq} - (§7.2). Additive sentences can contain either or both of these, and all additive sentences contain $=\lambda m$.

Kwak’wala additive operators can associate with any focus in the sentence (§7.2.3), al-

²³It is worth emphasizing that this is a special kind of implicature; in §5.3.2.3 I posited that implicatures about C may not be cancellable, since there is only one communicative goal – addressing the Big Metaquestion “What are we talking about?” – that can give rise to them.

though in §7.2.4 I observe that additive operators do not associate freely when an element is explicitly focused (cf. Koch and Zimmermann, 2010). Further data suggests, however, that this is not mandatory in Kwak’wala. I suggest instead the apparent association restriction is due to pragmatics: when an utterance has both a focus operator and a focused element, and it is unclear for what other reason the speaker might have focused that element, then the default interpretation is that the speaker intended that element to be the associate of the operator.

Kwak’wala exclusive operators are restricted in their association, with each operator only associating with foci in different parts of the sentence: *hig-*, subjects; *ʔo-*, predicates; and *ʔat-*, time adverbials. Within this phrase, however, any element can be the focus, in the sense of the minimal point of variance between the alternatives.

I implement these “free” and “fixed” association patterns with a hybrid theory of association (cf. Krifka, 2006) in which both a non-syntactic pragmatic mechanism and a syntactic mechanism each constrain possible interpretations of focus operators in different ways. Through the interaction of these mechanisms, listeners can use exclusive operators to narrow down the location of focus even in the absence of intonational cues.

In §8.7, I will examine the use of *=ʔm* in additive and exclusive sentences.

Chapter 8

Verum focus

8.1 Introduction

For much of this investigation, I have been looking at focus in response to WH questions, and focus patterns similar to those that respond to WH questions – what I will call “constituent focus”. WH questions are not, however, the only type of question, and so “constituent” focus is not the only kind of focus. It is also worth exploring how sentences vary when they answer *yes/no* questions and patterns similar to those that respond to *yes/no* questions; this kind of focus is generally termed *verum* focus, after Höhle (1988).

Verum focus receives relatively little attention in the literature on focus. In part this is because, in English and German, the languages for which the semantics of focus is most well-studied, it is marked somewhat indirectly, by accenting whatever word is in a particular structural position.

- (603) a. “Can you sing?” “Yes, I CAN sing.”
b. “Do you look like your father?” “Yes, I DO look like my father.”

Moreover, this marking is optional, at least in English.

- (604) a. “Can you sing?” “Yes, I can sing.”
b. “Do you look like your father?” “Yes, I look like my father.”

In Kwak’wala, on the other hand, *verum* focus is marked by the addition of a special enclitic. It is marked by the addition of the “discourse” enclitic $=\text{?}m$, which surfaces as $[\text{?}\text{ə}m]$ or $[\text{m}^{\text{̇}}]$ depending on whether a vowel follows.

- (605) a. $dən\check{x}\lambda inu\check{x}^w me\lambda e$ Ben
 $dn\check{x}-_h inu\check{x}^w =\lambda m = a = i$ Ben
sing-expert=VER=QUES=3DIST Ben
“Is Ben good at singing?”
- b. $\lambda em, dən\check{x}\lambda inu\check{x}^w m i.$
 $\lambda m, dn\check{x}-_h inu\check{x}^w =\lambda m = i$
VER, sing-expert=VER=3DIST
“Yeah, he is good at singing.”

Except in a few specific circumstances, it appears to be marked obligatorily. For example, to contradict the negative in (606a), the speaker only accepted the version with $=\lambda m$ (606a).

- (606) a. $\dot{k}i\lambda səs no\check{g}ada$
 $\dot{k}i\lambda s = s noq-_w ada$
not=2 heart/mind-REL
“You’re not smart.”
- b. ✓ $no\check{g}adamən$
 $noq-_w ada = \lambda m = n$
heart/mind-REL=VER=1
“I AM smart!”
- c. ✗ $no\check{g}adən$
 $noq-_w ad = n$
heart/mind-REL=1
“I’m smart!”
- d. ✗ $no\check{g}adatən$
 $noq-_w ada = t = n$
heart/mind-REL=but=1
“I’m smart!”

These are not the only uses of $=\lambda m$, however; $=\lambda m$ is used in a very wide variety of sentences, that are not obviously responses to yes/no questions or negative/positive contrasts. Some of these uses are fairly conventionalized, and to pin them down with a unified formal account would be like trying to pin down every use of English “so” or “well”, but in general most uses of $=\lambda m$ fall into one of three categories:

- Contexts in which there is a **polarity contrast** (i.e. positive/negative), like the *verum*

focus seen above, and many (but not all) yes/no questions.

- **Additive** contexts, like those sentences seen in §7.2, as well as what I call the “narrative additive”, the ubiquitous *ləʔəʔm* (“and then...”) seen in narratives.
- **Exclusive** contexts, like those sentences seen in §7.3, as well as “exclusive numeral” (e.g. “only two”) sentences.

In this chapter, I look at each of these, and propose that they are *all* contexts in which polarity contrasts are relevant, and thus that *=ʔm* marks the presence of a discourse-relevant polarity contrast.

8.2 Previous work on *=ʔm*

The use of *=ʔm* in asking and answering yes/no questions has been noted before; for example, the Kwak’wala textbook series by the U’mista cultural society concentrates on these uses of *=ʔm*. Although the textbook series is not completely explicit that *=ʔm* appears in yes/no questions and answers – it just calls them “questions” and “answers” – one of the very first pages of the first volume of the Kwak’wala textbook series (Powell et al., 1981a) is given over to the WH vs. yes/no distinction (607-608).

(607) a. *m̩ačalida?*
m̩as-h̩aʔ=i=da
what-kind=3_{DIST}=DET
“What’s that? (pointing way over there)”

b. *p̩əʔlida.*
p̩ʔ=i=da
fly=3_{DIST}=DET
“That’s a plane.”

(Powell et al., 1981a, p. 10)

(608) a. *p̩əʔlam̩əʔeda.*
p̩ʔ=ʔm̩=a=i=da
fly=VER=QUES=3_{DIST}=DET
“Is that a plane?”

b. pəλam¹ida.

p̣λa=ʔm=i=da

fly=VER=3DIST=DET

“Yes. That’s a plane.”

(Powell et al., 1981a, p. 10)

When explaining =ʔm in more detail in the sixth volume (Powell et al., 1981e, p. 46), the textbook says that =ʔm means “about the same thing in Kwak’wala as the words ‘do’ or ‘am’ in these English sentences:”¹

(609) a. “DO you want some coffee?”

b. “Yes, I DO want some, and I AM hungry.”

c. “I DO love your cookies, but I AM getting fat.”

The workbook for volume six (Powell et al., 1981g, p. 52) states that =ʔm is found “in questions, the answers to questions, and emphatic statements”.

The very first descriptions of =ʔm, in Hall (1888a) and Boas (1900), likewise seem to be focusing on its *verum* usage, although they also lacked a term for it. Most often they described it in terms of expectations – whether an event was expected or not – in the same way that you could describe the difference between “She kissed me” and “She DID kiss me” in terms of whether I had expectations about being kissed.

=ʔm is first discussed in Hall (1888a), who terms it the “emphatic” form: “Most tenses have two forms, the ordinary and the emphatic, e.g., ‘I have been,’ *laxdən*; but if this is denied or you wish to state the fact stronger, *ləʔəmχdən*, ‘I did go,’ or ‘but I have been’” (Hall, 1888a, p. 78), and “The emphatic form of the Past tense is also used when a person, having been sent to strike another, returns saying, ‘I have struck him’” (Hall, 1888a, p. 86).

In his verb conjugation tables (Hall, 1888a, p. 79–86), Hall uses “(But) I did...” as the translation of each “emphatic form”; that is, regular “I strike” versus emphatic “But I did strike him”, “I did strike him”, etc.^{2,3} He also describes it as expressing the difference between “action expected” and “action not expected” (Hall, 1888a, p. 84).

The next description occurs in Boas (1900):

¹I should clarify that these English example sentences do not quite represent the distribution of =ʔm that I have found. However, the actual Kwak’wala examples of =ʔm presented in (Powell et al., 1981e, pp. 44–53) are all consistent with my own data.

²There is usually no difference in his translations of the future and “conditional”, since English makes no textual distinction here; he translates both regular and emphatic future as “I will...”, “I may”, etc., although sometimes he renders the emphatic future as “But I will...”.

³In one table, Hall (1888a, p. 90) labels the =ʔm forms as “(2.) (Negative.) *I am not seen.*”, but this is clearly a typographical error, as the immediately previous table (of genuinely negative forms) has this exact same number, label, and translation.

That a subject⁴ has been referred to before, or that it has been in the mind of the speaker before, is expressed by the suffix *-m*. *gaǰən nəmuk^wε?* means “my friend of whom I have not been thinking has come unexpectedly”; *gaǰmən nəmuk^wε?* means “my friend who was expected has arrived” (Boas, 1900, p. 717).

Later descriptions of *=əm* focus instead on the most frequent textual use of *=əm*, its “conjunctive” use in the auxiliary sequence meaning “and so...” or “and then he/she...”; for example, that it indicates “close connection in thought between two sentences” (Boas, 1911, p. 451). Descriptions of *=əm* in later work (Boas et al., 1947; Levine, 1977; Berman, 1982) largely descend from this hypothesis – that *=əm* represents an “old subject”, “old information”, or a “close connection” with a previous sentence.

These descriptions are not incorrect – this is indeed the most frequent textual use of *=əm* – but nonetheless the wider distribution of *=əm* remains puzzling. Many utterances have an old subject, old information, or a close connection with previous sentences, but do not receive *=əm*, such as many answers to WH questions. Meanwhile, utterances can lack all of these conditions, but nonetheless receive *=əm*. Yes/no questions, for example, can be asked without any prior context, but they usually still receive *=əm*.⁵

8.3 *=əm* in assertions

8.3.1 Affirmative answers

=əm occurs almost obligatorily⁶ in an affirmative answer to a yes/no question.

- (610) a. *ʔixʔaxmas quʔs didagəʔoʔs*
ʔixʔak=əm=a=s q=uʔs didag=a=uʔs
 like=VER=QUES=2 for=2POSS drink.tea=INVIS=2POSS
 “Do you like to drink tea?”
- b. *ʔixʔaxmən qən didagε?*
ʔixʔak=əm=n q=n didag=a=a?
 like=VER=1 for=1POSS drink.tea=a=INVIS
 “I do like to drink tea.”

⁴“Subject” here probably means a subject of conversation, not a grammatical subject.

⁵In fact, the behavior of *=əm* in yes/no questions is even more puzzling, in that a “close connection” to previous sentences would in some circumstances seem to *prevent* *=əm* from occurring (§8.4.2).

⁶There is only one systematic exception that I can find, which is when its expression would induce an inappropriate exclusive numeral reading (§8.5).

- (613) a. w̌yksas?
 w̌y-ks=as
 WH-manner=2
 “How are you?”
- b. ʔix̌m̌ən
 ʔik=ʔm=ən
 good=VER=1
 “I’m well.”

Note that this is one of many instances in which =ʔm is appropriate whereas the English “stressed auxiliary” *verum* marking would not be; more such examples will be seen in §8.3.1.

In general, Kwak’wala =ʔm and the English stressed auxiliary have similar distributions in answers. Kwak’wala speakers appear to be aware of this correspondence; if =ʔm is added to a sentence, the result is usually translated using the English stressed auxiliary (SA) construction.

- (614) a. duq^wələn λuʔs
 duq^w-l=ən λ=uʔs
 see-ONGOING=1 CONN=2POSS
 “I see you.”
- b. duq^wələm̌ən λuʔs
 duq^w-la=ʔm=ən λ=uʔs
 see-ONGOING=VER=1 CONN=2POSS
 “I do see you.”

However, =ʔm is somewhat more common than the English stressed auxiliary in situations where the yes/no question would only be implicit, like in the contexts in (615).

- (615) *Context: I’ve picked up the speaker’s pen to write something, but before doing so make a little scribble to see if there is ink in it. The speaker then says...*

ḱatam̌uḱ
 ḱata=ʔm=uḱ
 write=VER=3MED
 “It writes.”

(616) Context: A child has gotten lost in the forest, but the Wildman saves him.

- a. ləmisi Bək^wəs ñika, Nəx^wałəla gaxən, gənanəm.
 l=ʔm=is=i Bk^w-_hs ñika, Nx^w-ał-la gax=n, gn-_wanm.
 then=VER=and=3DIST man-on.ground say, near-pos-ONGOING come=1, young-person
 Ğilas.
 Ğil=a=s.
 come=HORT?=2
 “The Wildman said, Come near me, child. Come.”

- b. ləmis ñiki Bək^wəs, ʔixʔəmλuʔs.
 l=ʔm=is ñik=i Bk^w-_hs, ʔik=ʔm=λ=uʔs.
 then=VER=and say=3DIST man-on.ground good=VER=FUT=2POSS
 “Then Wildman said, ‘You’re going to be okay.’” (Cranmer and Janzen, 2014)

These are situations in which the English stressed auxiliary (“It DOES write”, “You ARE going to be okay”) is possible, but, in my own judgment, is somewhat awkward in the absence of an explicit question (e.g., “Does it write?”, “Am I going to be okay?”). Kwak’wala =ʔm does not seem to be dependent – or as dependent – on a *linguistically* explicit question or contrast (cf. Creswell, 2000).

In §8.4, we will see that even though =ʔm has a distribution somewhat similar to the English stressed auxiliary in assertions, it has a quite different distribution in questions.

8.3.2 As “yes”

On its own – that is, with no other sentential material – ʔm serves as one of the words for “yes”.

- (617) a. wəlməs yəx^wa
 wəl=ʔm=a=s yx^wa
 can=VER=QUES=2 dance
 “Can you dance?”
- b. ʔəm, wəlmənuʔx^w yəx^wa
 ʔm, wəl=ʔm=nuʔx^w yx^wa
 VER, can=VER=1EXCL dance
 “Yes, we can dance.”

We might, therefore, say instead that Kwak’wala speakers indicate affirmative answers by encliticizing a word for “yes” in second position, similar to Spanish adverbial *sí* (Hernanz,

2006).

(618) a. Pepito **sí** come pasta.

Pepito **yes** eats pasta.

“Pepito **does** eat pasta.”

(Hernanz, 2006, p. 105)

b. Chirac no ha dado detalles de su dolencia. El hospital **sí** ha
Chirac not has given details of his illness. The hospital **yes** has

señalado que Chirac no podrá volver a volar en seis meses.

indicated that Chirac not will.be.able return to fly in six months.

“Chirac has not revealed details of his medical problem. However, the hospital **has**
indicated that Chirac will be unable to fly again for six months.”

(Hernanz, 2006, p. 111)

I think it is more general, however, to say that “yes” is the interpretation of sentential =*ʔm* when no other material is present, rather than say that =*ʔm* means “yes” in all contexts; =*ʔm* appears in a much wider variety of contexts than would something that only expresses “yes”.

There are three words in Kwak’wala that function similarly to English “yes”, *ʔəm*, *ʔe*, and *qel*; I will briefly consider their distribution in the sections that follow.

8.3.2.1 *ʔəm* vs. *ʔe*

ʔe seems to have much the same range as *ʔəm*. That it can occur as the “yes” word in sentences with second-position =*ʔm* makes clear that its usage at least overlaps with *ʔəm*.

(619) a. lagənuχ^wməʔəχ ġəʔala
la-gnuχ^w=ʔm=a=uχ ġʔala
go-??=VER=QUES=3MED morning
“Is it morning already?”

b. **ʔe**, ləmuχ ġəʔala
ʔe, l=ʔm=uχ ġʔala
yes, then=VER=3MED morning
“**Yes**, it’s morning now/already.”

(620) Context: *We are playing a guessing game, and one player realizes it is her turn.*

- a. oh, nug^waλi
 oh, nug^wa=λ=i
 oh, be.1=FUT=3DIST
 “Oh, I’m next.”
- b. ʔe, suλi
 ʔe, su=λ=i
 yes, be.2=FUT=3DIST
 “Yes, you’re next.”

The use of ʔam in place of ʔe seems to be a recent innovation; ʔe is the form attested in both Hall’s (e.g. 1897, p. 113) and Boas and Hunt’s (e.g. 1905, p. 35) texts.

One speaker, who mostly uses ʔam, noted, “The old people don’t say ʔam, they say ʔe”, and “ʔe, I haven’t heard that for a long time.” Another speaker tends to use ʔe during elicitation and teaching, but mostly uses ʔam in conversation, suggesting perhaps a register difference in which ʔe is formal and ʔam is casual.⁷

8.3.2.2 ʔam vs. qeλ

The other word for “yes” is qeλ ([qɛɭ]), which at least for some speakers has a somewhat different use than ʔam. It seems to be used for commitment, consent, and agreement regarding a course of action; I translate it as “sure”.

- (621) a. ʔəχʔεχsdaṁaseχa fresca?
 ʔχ_{-h}εχsda=ʔm=a=s=e=χa fresca?
 do-want=VER=QUES=2=QUES=ACC fresca?
 “Do you want a Fresca?”
- b. qɛɭ
 qeλ
 COMMIT
 “Sure.”

⁷It is interesting to note that this same speaker would, when I used ʔe in conversation, actually correct me to ʔam.

(622) a. la λ as la \check{x} a kəlwilas
 l=(a) λ =as l=(a) \check{x} a klx^w-_wi \check{t} -_was
 go=FUT=2 PREP=ACC buy-indoors-PLACE
 “You’re going to the store?”, or possibly just “You go to the store.”

b. qe \check{t} , lə γ əm λ ən
 qe λ , l= γ m= λ =n
 COMMIT, go=VER=FUT=1
 “Sure, I’ll go.”

(623) a. γ ə \check{x} e \check{x} a wəp qə γ ən, wə γ \check{x} a
 γ \check{x} =i \check{x} a wəp q γ =n, w γ \check{x} a
 aux=QUES? ACC water for=1, please
 “Could you please get me some water?”

b. qe \check{t}
 qe λ
 COMMIT
 “Sure.”

A speaker noted about (623) that you can say *γ əm* here, but it does not seem to carry the same commitment: “ *γ əm* it might be a half and hour, *qe \check{t}* is right away.” I think it likely that *γ əm* simply provides information, whereas *qe λ* expresses the speaker’s commitment to act.

Meanwhile, *qe λ* was judged inappropriate in response to a purely informational question.

(624) a. sasəm^wnuk^wmase?
 sasm-nuk^w= γ m=a=s=e?
 offspring-have=VER=QUES=2=QUES?
 “Do you have children?”

b. γ əm
 γ m
 VER
 “Yes.”

c. ✗ qe \check{t}
 qe λ
 COMMIT
 “Sure.”

qeλ might have some degree of positive meaning, in that you can use it to agree to do something, but using it to agree to stop doing something was felt to be strange; in this way it is more similar to English “sure” than “okay”.

(625) a. ḡ^waʔs qasilela
 ḡ^waʔ=s qas-*eh*yly-ala
 stop=2 walk-back.and.forth-ONGOING
 “Stop pacing!”

b. ?qeł
 qeλ
 COMMIT
 “Sure.”

So while the distributions of *ʔəm* and *qeλ* overlap, they are not the same; *ʔəm* appears to be an answer affirmatively to a yes/no question, while *qeλ* appears to consent to a request.

qeλ also occurs in Boas and Hunt (1905, p. 21, p. 523); they translate it as “indeed”. It is also the usual expression of “yes” in Hall’s translations (1882; 1897), for example in his translation of Matthew 5:37: “But let your communication be, Yea, yea [‘Kegl, kegl’]; Nay, nay: for whatsoever is more than these cometh of evil.” (Hall, 1882, p. 19).

In neither Hall’s nor Boas and Hunt’s texts is there any indication of an “information yes” vs. “consent yes” distinction. I suspect that this distinction has arisen for some speakers due to the adoption of independent *ʔəm* as a specific “answering yes”.

8.3.3 Affirmative contrast

=*ʔm* is also used, like the English stressed auxiliary *verum*, to express a contrast between positive and negative statements.

(626) a. k^hiʔsəs noḡada.
 k^hiʔs=s noq-*w*ada
 not=2 mind-REL
 “You’re not smart.”

b. noḡadamən
 noq-*w*ada=ʔm=n
 mind-REL=VER=1
 “I am smart!”

- (627) a. *Context: We are playing an animal guessing game; the player has in mind “cow” and we are asking questions to try to narrow down what animal she is thinking of.*

ğəlqamase?
 ğlqa=?m=a=s=e?
 swim=VER=QUES=2=QUES?
 “Do you swim?”

- b. k̇isən ?əẋ?exsda qən ğəlqe?
 k̇is=n ?ẋ-h exsda q=n ğlq=a=a?
 not=1 do-want for=1POSS swim=a=INVIS
 “I don’t like (lit: want) to swim...”

- c. ?ix?ak?əṁẋən λȧẋa ẇap, qən nȧẋ?iḋe?
 ?ix?ak=?m=ẋ=n λ=(a)ẋa ẇap, q=n naq-x?id=a=a?
 like=VER=?=1 CONN=ACC water, for=1POSS drink-CHANGE=a=INVIS ACC water
 “I do, however, like water, for drinking the water.”

It is worth noting, however, that it does not tend to be used in anticipation of a negative; if we reverse the order of the sentences in (628a), the =?m does not appear (628b).

- (628) a. k̇iyosən ẋẇənuk^wa, ẋẇənuk^wadami Jon
 k̇yus=n ẋẇnuk^wa, ẋẇnuk^w-_wada=?m=i Jon
 none=1 child, child-REL=VER=3DIST Jon
 “I don’t have any kids, but Jon does.”

- b. ẋẇənuk^wadi Jon, k̇iyostən sasəma.
 ẋẇnuk^w-_wad=i Jon, k̇yus=ṫ=n sasma.
 child-REL=3DIST Jon, none=but=1 child.
 “Jon has kids, but I don’t.”

8.3.4 Negative answers

=?m is *not* generally used in negative answers to yes/no questions.

(629) *Context: We are playing a guessing game, in which one player secretly chooses an animal and the others try to guess what it is by asking questions.*

- a. ġəlqamase?
 ġlqa=?m=a=s=e?
 swim=VER=QUES=2=QUES?
 “Do you swim?”
- b. k̇isən ?əχ?exsda qən ġəlqe?
 k̇is=n ?χ-h exsda q=n ġlq=a=a?
 not=1 do-want for=1POSS swim=a=INVIS
 “No, I don’t like to swim.”

(630) *Context: The speaker is narrating a storyboard in which a lost young mouse asks various animals where her mother is.*

- a. ġ^waʷina, q̇oʷamaseχ
 ġ^waχ^w-h ina, q̇oʷa=?m=a=s=e=χ
 raven-NMZ, know=VER=QUES=2=QUES=ACC
 ?əχ?asəsən ?əbəmpeʷa
 ?χ-w as=s=n ?bmp=a=aʷ=a
 do-PLACE=3POSS=1POSS mother=POSS=INVIS=QUES
 “Raven, do you know where my mother is?”
- b. k̇iʷsən q̇oʷaχ ?əχ?asəsʷs ?əbəmpeʷoʷs
 k̇iʷs=n q̇oʷ=(a)χ ?χ-w as=s=ʷs ?bmp=oʷ=ʷs
 not=1 know=ACC do-PLACE=3POSS=2POSS mother=INVIS=2POSS
 “I don’t know where your mother is.”

(631) a. didagə?exsdamase?
 di-di-gʷ-h exsda=?m=a=s=e?
 REDUP-tea-consume-want=VER=QUES=2=QUES?
 “Do you want tea?”

- b. k̇iʷsən ?əχ?exsda χa di
 k̇iʷs=n ?χ-h exsda χa di
 not=1 do-want ACC tea
 “I don’t want tea.”

Even if the question itself is negative, the =*ɔm* does not appear in the answer; that is, =*ɔm* does not appear to be a marker of a same-polarity answer.

(632) a. *kiʔseʔən* *wel ʔəʃʔe* *ʃa kuki*
 kiʔs=e=n *wel ʔʃ-xʔid* *ʃa kuki*
 not=QUES=1 can do-CHANGE ACC cookie
 “Can’t I have a cookie?”

b. *ki, kiʔsəs wela*
 ki, kiʔs=s wela
 no, not=2 can
 “No, you can’t.”

We can note, however, that this polarity-sensitivity does *not* seem to extend to additive and exclusive sentences; =*ɔm* is still seen in the negative additive sentences in §7.2.5 and in the negative exclusive sentences in §7.3.7.

When negation and =*ɔm* occur together, the resulting meaning is “not yet”.⁸

(633) *kiʔsmən* *ǵwala*
 kiʔs=ɔm=n *ǵwala*
 not=VER=1 stop
 “I’m not finished yet!”

(634) *kiʔsmuʃ* *miʃʔənʃa*
 kiʔs=ɔm=uʃ *miʃ-hnʃ=a*
 not=VER=3MED sleep-time=A
 “It isn’t bedtime yet.”

(635) *kiyosmən* *la* *siʔsasəma*
 kyus=ɔm=n *la* *sɨ-sasma*
 none=VER=1 now REDUP-offspring
 “I don’t have any kids yet.”

This combination is also the conventional way to express the notion “before” (Boas et al., 1947, p. 295).

⁸The “not yet” meaning often occurs with either *la* (in the sense of “now”) or *-xse* (“still”), but neither is obligatory, as we can see in (633) and (634).

- (636) kiʔkənipsəmaluǰda piʔpələgaǰ ǰuʔs
 kʲ-knip-sm-al=uǰ=da pʲ-pl-(g)ga=q ǰ=uʔs
 REDUP-WRAP?-ADJ?-ONGOING?=3MED=DET REDUP-plate-in.hollow=VIS ACC=2POSS?
 ʔiʔsʔəm ʔəǰcʲus la ǰa gəldas
 ʔiʔs=ʔm ʔǰ-cʲu=s la ǰa glt-*w*as
 not=VER do-in?=3POSS? PREP ACC long-PLACE

“I wrapped the plates **before** putting them in the box” (lit: “...when I had **not yet** put them in the box”)

- (637) cux^wʔida ǰuʔs ʔug^wina ʔiʔsm^ʔaǰuʔs la gəǰǰʔida
 cux^w-xʔid=a ǰ=uʔs ʔug^wina ʔiʔs=ʔm=aǰ=uʔs la gəǰq-xʔida
 wash-CHANGE=HORT ACC=2POSS body not=VER=V2=2OSS now swim-CHANGE

“Shower **before** you go swimming.” (Lit: “Wash your body when you have **not yet** swum.”)

In other words, =ʔm is not prevented from appearing in a negative sentence, but the result does not just mean negation in response to a yes/no question; they happen to have a more specific interpretation. This more specific interpretation is itself a polarity contrast, in that it contrasts a negative in the present (or, rather, at the reference time) with a positive in the future (or in the future of the reference time), but it should be emphasized that not just any polarity contrast in a negative sentence conditions =ʔm.⁹

We will see in §8.5 another class of examples where =ʔm has a conventionalized interpretation that appears to block the appearance of =ʔm where one would otherwise expect it: the use of =ʔm to mark numerals as exclusive (e.g., “only two”).

8.3.5 Agreement

Another use of *verum* focus is agreement:

- (638) a. “You look like your father.”
 b. “Yes, I do look like my father.”

Kwak’wala =ʔm is also used in this manner.

⁹For example, the construction for “not anymore” (kiʔs + la) would also be a time-related polarity contrast, but such sentences *do not* receive =ʔm. (In fact, the =ʔm seems to be what disambiguates “not yet” from “not anymore”.)

- (639) a. *hedas* *ǰ^{wi}ǰəmuʔs* *ʔump*
 he=d=as *ǰ^{wi}-i-(ǰ)m=uʔs* *ʔump*
 be.3DIST=DET=2 *whatever-face=2POSS* *father*
 “You look like your father.”
- b. *ʔolaʔəm*, *hem̐ən* *ǰ^{wi}ǰəmi*
 ʔw-ala=ʔm, *he=ʔm=n* *ǰ^{wi}-i-(ǰ)m=i*
 so-ONGOING=VER, *be.3DIST=VER=1POSS* *whatever-face=3DIST*
 “That’s right, I do look like him.”¹⁰

In both the English and Kwak’wala sentences, there are elements (“yes”, stressed “do”, =*ʔm*) that we associate with yes/no question answering, but in the absence of a question, suggesting that in both languages there is an implicit question meaning “Do you look like your father?” that arises from the utterance of (638a/639a).

Regarding where this question comes from, we can turn to Ginzburg’s (1996) proposal regarding reactions to assertions: that speakers have access to a repertory of reactions (acceptance, rejection, etc.) to speech acts, and one of the available reactions to an assertion *p* is to treat it as having raised the question *whether p*.

Speakers can then answer this question using the same means (“yes”, stressed “do”, =*ʔm*) that an overt bipolar question would receive.

I will call this response strategy **bipolar elaboration**; it will play a further role in §8.7.1.

8.3.6 Recap

=*ʔm* appears in affirmative answers to yes/no questions, to contrast a positive with a negative, and to affirmatively agree. As a word on its own, it is the word for “yes” in response to an information question (as opposed to “yes” in response to a request).

=*ʔm* does not appear in answers to WH questions unless another condition for the use of =*ʔm* is true, like the presence of an exclusive operator. It also does not appear in negative answers to yes/no questions; when =*ʔm* and a negative operator co-occur they have a conventional reading of “not yet”.

¹⁰It may appear that this sentence only has =*ʔm* because it is a copular sentence, but =*ʔm* is ubiquitous only in Type I copular sentences (§4.2.7, §8.9). Indefinite-predicate copular sentences tend take =*d(a)* or no enclitic, as seen in (639a); like locative sentences they only take =*ʔm* when there is another reason, like being a bipolar question or affirmative answer.

8.4 =ʔm in questions

8.4.1 Yes/no questions

=ʔm also appears in most yes/no questions, as in (640) and in almost all of the yes/no questions presented in this chapter so far (605a, 610a, 611a, 617a, 619a).

- (640) k^wak^walam^ʔase?
k^wak^w-(k)_ia-la=ʔm=a=s=e
Kwagiulh-sound-ONGOING=VER=QUES=2=QUES
“Do you speak Kwak’wala?”

This is a case where =ʔm occurs that the English SA would not. If I were to express this in English using a SA construction – “DO you speak Kwak’wala?” – it would suggest that the discourse already contained the question “Do you speak Kwak’wala?” in some form and we were returning to it.

=ʔm is not felicitous in WH questions; the speaker judging (641) would not even allow me to finish the sentence.

- (641) ✗ ʔəng^wamida...
ʔng^wa=ʔm=i=da
who=VER=3DIST=DET
Intended: “Who...”

Intriguingly, however, not every yes/no question contains =ʔm. There are several types of Kwak’wala sentences that look like yes/no questions, and are translated as yes/no questions, but do not receive =ʔm.

I will suggest, in (§8.6.2), that the difference that the =ʔm is sensitive to is the difference between types of alternative sets that apparent “yes/no” questions – that is, sentences with the yes/no question-like morphosyntax rather than WH question morphosyntax – can represent. I adopt the monopolar/bipolar terminology of Krifka (2013) here.

1. **Bipolar** questions are the prototypical yes/no questions; a bipolar question like “Do you want ice cream?” offers the listener two alternatives $\{I \text{ want ice cream}, I \text{ do not want ice cream}\}$.
2. **Monopolar** questions, including “rising declarative” questions such as “You want ice cream?!?”, only offer one alternative $\{I \text{ want ice cream}\}$.

3. **Alternative** questions, such as “Do you want chocolate or vanilla?” pronounced with a rising-falling intonation, offer a choice between the alternatives $\{I\text{ want chocolate, } I\text{ want vanilla}\}$.

This typology of questions appears to underlie the distribution of $=\lambda m$, which occurs systematically in bipolar questions, and is absent in monopolar and alternative questions.

8.4.2 Reprise questions

One class of questions in which $=\lambda m$ systematically fails to appear is “reprise” or “reflex” questions: questions that “repeat a preceding nonquestion (in whole or in part) for confirmation” (Bolinger, 1989, p. 133).

(642) *Context: Two speakers are role-playing about the expression of feelings, one acting out the emotion and the other asking them about it.*

a. $\lambda o\lambda n$ wosa
 $\lambda w\text{-al}=\lambda n$ wos=a
 SO-ONGOING=1 sad=PRES
 “I’m really sad.”

b. wosas?
 wos=a=s
 sad=QUES=2
 “You’re sad?”

(643) *Context: There’s a glass of water sitting out. The speaker has just asked Katie if she knew whose water it was, and Katie answered that it was Jon’s. The speaker then asks Jon...*

Jon, quse gada $\dot{w}ap$
 Jon, qus=e ga=da $\dot{w}ap$
 Jon, be.2POSS=QUES 3PROX=DET water
 “Jon, is this your water?”

This same question pattern also occurred in an instance of asking for confirmation of one’s own assertions:

- (644) *Context: We are playing “drawing straws”; I have in my hand three straws, one shorter than the rest, we are each trying not to pick the short straw. I ask who got the short straw. The speaker announces that I have it, and then asks a confirmation question.*

loʎase ʃa ʔəmbidu ɔ̃wəʃʎoý?
 la-w-ʎ=as=e ʃa ʔma-bidu ɔ̃wʃ-ʃʎw-aỹ
 go-out-obtain=2=QUES ACC small-DIMIN grow-branch-NMZ
 “Did you get the short straw?”

=ʔm-less questions also seem to be used for reflex questions expressing disbelief, incredulity, or surprise:

- (645) *Context: Laura and Jon come home from a fishing trip and, a bit later, find Pat eating what appears to be their fish.*

həmxʔidase ʃənuʔʃ kətəla
 hm-xʔid=as=e ʃ=nuʔʃ kətla
 eat-CHANGE=2=QUES ACC=1EXCL.poss salmon
 “Are you eating our fish?”

- (646) *Context: The speaker thinks Pat was saying that Masaki swam to Korea.*

kʲiʔsən ʔoq̃wəs, ǧəlqeʔe laʃ Korea?
 kʲiʔs=n ʔw-q̃=s, ǧlq=a=i la=ʃ Korea?
 not=1 so-feel=2, swim=QUES=3DIST PREP=ACC Korea?
 “I don’t believe you; he swam to Korea?”

- (647) *Context: I had dressed up as a double of my friend; when I arrived at the party he knew immediately who I was, but was shocked. The speaker is role-playing his reaction here.*

a. haỹəgeyəs gaʃən?
 haỹgey=s gaʃ=n?
 copy?=2 come=1?
 “Are you copying me?!?”

The sentences above occur in the same situations as, and could be translated as, English “rising declaratives” (Gunlogson, 2002), in which the syntax of a declarative sentence is accompanied by the rising intonation of a question: “You’re sad?”, “This is your water?”, “You got the short straw?”, “You’re eating our fish?!?”, “He swam to Korea?!?”, “You’re copying me?!?”.

Gunlogson (2002) analyzes English “rising declaratives” or “declarative questions” as a kind of addressee-oriented assertion; rather than committing the speaker to *P* the way normal assertions do, the speaker puts forward a proposal that the *Addressee* commits to *P*. Krifka (2013) proposes that we treat rising declaratives as requests from the speaker that the listener assert *P*. He describes such questions as monopolar, since they do not genuinely propose two alternatives for the speaker to choose from, as opposed to an ordinary bipolar yes/no question that requests that the speaker decide between *P* and *not P*.

Another utterance on the border of questioning and asserting is “Is that so!” While this is not a “rising declarative” in English, it nonetheless exhibits aspects of both questions and assertions: the syntax of a yes/no question with a falling intonation. It is interesting to observe that the conventional “Is that so!”/“Really!”/“Well I’ll be!” reaction in Kwak’wala is a non-*ʔm* question:

- (648) ʔolaʔa?!
 ʔw-ala=a
 SO-ONGOING=QUES
 “Is that so!”

Like the questions above, it is not as if the speaker is querying, in response to an utterance *P*, whether the other speaker commits to *P* or to *not P*; they already know the other speaker’s commitment. Rather, they are expressing something about *P* – say, that it is interesting, that it is incredible, or that it is doubtful – without necessarily committing themselves to its truth.¹¹

8.4.3 “Sample answer” questions

Another use of yes/no questions in a discourse is to introduce possible answers without asserting them. Some =*ʔm*-less questions, like (649a-649c) and (650b-650d)¹² seem to be of this type.

¹¹The speaker might be still be asking *something* about *P* – the source of information, the listener’s degree of commitment, etc. – but whatever this question is, it presumably is not just requesting a resolution to which of *P* and $\neg P$ holds, the answer to which is already established.

¹²I am not certain whether the questions in (650b-650d) constitute good examples or not, since I am unsure whether “conjunctural questions” (in the sense of Littell et al., 2009) like these ever receive =*ʔm*.

It may be that the *m* that follows -(g)an- in yes/no conjunctural questions (but is absent in WH conjunctural questions) is historically =*ʔm*; if we are looking for sources of *m* that would differ between yes/no and WH questions then =*ʔm* would be a likely source. I do not think this *m* is synchronically =*ʔm*, however; I do not hear any glottal component in -ganəm, and nor did Boas (1947, p. 351).

(649) *Context: I have drawn a strange blue animal on a whiteboard.*

- a. busiyoʔoǰe
busiy=a=uǰ=i
cat=QUES=3MED=QUES
“Is it a cat?”
- b. mig^watoʔoǰe
mig^wat=a=uǰ=i
seal=QUES=3MED=QUES
“Is it a seal?”
- c. k^utəlaʔoǰe
k^utla=a=uǰ=i
fish=QUES=3MED=QUES
“Is it a fish?”
- d. məcaʔanawisuǰ
məs-_haʔanawis=uǰ
what-kind=MODAL=3MED
“What could it be?”

(650) *Context: Stacey needs to buy pet food at the store, but does not know what kind of animal she is buying food for.*

- a. məcaʔanawisida Fluffyxλεʔ
məs-_haʔ-_hanawis=i=da Fluffy-xλ=a=aʔ
what-kind-modal=3DIST=DET Fluffy-name=a=INVIS
“What could Fluffy be?”
- b. w^aciɡanəmeʔe
w^as-_hi-ɡanm=a=i
dog-NMZ-modal=QUES=3DIST
“Could he be a dog?”
- c. busiɡanəmeʔe
busi-ɡanm=a=i
cat-modal=QUES=3DIST
“Could he be a cat?”

- d. labicganəmeʔe
 labic-ganm=a=i
 rabbit-modal=QUES=3DIST
 “Could he be a rabbit?”

It would be reasonable, I think, to suggest that these questions, like the questions considered above, are not really presenting bipolar alternatives. The speaker in (649a-649c) is presumably *not* asking the listener to choose one answer from {It is a cat, It is not a cat}, then choose between {It is a seal, It is not a seal}, and finally between {It is a fish, It is not a fish}.

Instead, the speaker seems to be iterating over the alternative set for “What is that?”, expressing each possibility in turn. These are still questions rather than assertions – the Kwak’wala and English morphosyntax of these utterances are both question-like – but the lack of =ʔm would suggest that these are questions more like those in §8.4.2. I would suggest, and will suggest in more detail in §8.6.2, that what the confirmation questions in §8.4.2 and these questions have in common is that they both simply express {P}.

8.4.4 Disjunctive questions

Kwak’wala exhibits an interesting alternation in “disjunctive” or “alternative” questions – that is, questions that offer a choice between two or more expressed possibilities – in that only some of them have =ʔm.

- (651) ʔəʔʔəʔsdaṃasi ʔa kafi λuʔ helaxida diy
 ʔʔ-h.əʔsda=ʔm=a=s=i ʔa kafi λw he=laʔ=i=da diy
 do-want=VER=QUES=2=QUES ACC coffee and be.3DIST=HYP=3DIST=DET tea
 “Do you want coffee or tea?”

- (652) ʔəxnuk^wadaṃasiʔa waʔi λuʔ helaxida busi
 ʔx-nuk^w-_wada=ʔm=a=s=i=ʔa was-hi λw he=laʔ=i=da busi
 do-have-REL=VER=QUES=2=QUES=ACC dog-NMZ and be=hyp=3DIST=DET cat
 “Do you have a cat or dog?”

(653) *Context: A boy is running around playing making-believe shooting; an adult addresses him.*

ɕəxəlaʔəmʎas λuʔs helaxida hənʎapəʔenuχ^w
 ɕx-la=ʔm=ʎ=a=s λw̄=s he=laχ=i=da hnʎa-p_{-h}nuχ^w
 awake-ONGOING=VER=FUT=QUES=2 with=2? be=HYP=3DIST=DET shoot-RECIP-expert
 “Are you going to be a policeman (rough lit: ‘alert one’) or soldier (lit: ‘shooting-at-each-other-expert’)?”

The questions in (651-653) above all have =ʔm, but the questions in (654-655) do not.

(654) bəg^wanəmuʔuχe λuʔs ɕədala
 bk^w-_wanm=a=uχ=i λw̄=s ɕd-ala
 man-person=a=3MED=QUES and=OBL? woman-ONGOING
 “Is that a man or a woman?”

(655) *Context: Someone is coming over who is nervous around dogs, so I need to know whether the dog is in the house or outside somewhere.*

hedeʔe ləʔeda w̄aciʔeda guk^w λuʔ
 he=d=a=i l=a=i=da w̄aci=a=i=da guk^w λuʔ
 be.3DIST=DET=QUES=3DIST PREP=EMBED=3DIST=DET dog=EMBED=3DIST=DET house and
 helax laxa ʎasanoý
 he=laχ la=χa ʎas-anw-ay
 be.3DIST=hyp PREP=ACC outside-??-NMZ
 “Is the dog inside or outside?”

I think the difference here lies in an ambiguity in disjunctive questions (Karttunen, 1977; von Stechow, 1991; Roberts, 2012; Truckenbrodt, 2013), that we can observe even in English. We can note that there are two different interpretations possible for a disjunctive yes/no question like (656a); depending on context and intonation, it can either mean (656b) or (656c).

- (656) a. “Do you play guitar or bass?”
 b. = Is it the case that you play one or more of {guitar, bass}?
 c. = Which of {guitar, bass} do you play?

The interpretation in (656b) is that of a genuine bipolar question, whereas the interpretation in (656c) is more that of a restricted-domain WH question. I will call the latter – questions that are just offering a choice between alternatives – “fixed-choice alternative questions”, and the former – questions ones that ask a yes/no question about a disjunction – “bipolar disjunctive

questions”.

If we look at the =?m-less questions in (654-655), what they have in common is that they could not reasonably be interpreted as bipolar disjunctive questions. The speaker in (654) is asking the listener to choose between *{that the person is a man, that the person is a woman}*, rather than between *{that the person is a man or woman, that the person is neither a man nor woman}*. Likewise, the speaker in (655) has to be asking the listener to choose between *{that the dog is inside, that the dog is outside}*, rather than between *{that the dog is inside or outside, that the dog is neither inside nor outside}*.

On the other hand, (651-653) could have – and I would say that =?m suggests they really do have – a bipolar interpretation: *{that you want coffee or tea, that you want neither coffee or tea}*, etc.

8.4.5 Negative questions

=?m does not seem to occur in negative questions (657, 658c), except (as with assertions) in the “not yet” combination.

(657) *Context: Someone has just turned down some tea.*

kiʔsas ʔixʔax ʃa di?
 kiʔs=a=s ʔixʔax ʃa di?
 not=QUES=2 like ACC tea
 “You don’t like tea?”

(658) *Context: Each speaker, A and B, is looking at a different version of the same landscape, and without looking at the other’s landscape, is trying to figure out what the differences are.*

a. pəʎaʎak^wlida ʔəʎəbu nəʃaq
 pəʎa-_wʎak^w-l=i=da ʔəʎbu nəʃaq
 fly-gradual-ONGOING=3DIST=DET seven goose
 “Seven geese are flying along.”

b. kəyos, yudəx^w
 kyus, yudx^w
 none, three
 “There aren’t; there’s three.”

c. p̄əλan̄ak^wəlida ʔəλəbuχ̄ nəχ̄aq. k̄əya?
 p̄λa-_wn̄ak^w-l=i=da ʔλbu=q nχ̄aq. k̄y=a
 fly-gradual-ONGOING=3DIST=DET seven=VIS goose. not=QUES
 “Seven geese are flying along. **No?**”

d. yudəχ^w
 yudχ^w
 three
 “Three.”

Negative questions in English can have a “bias”, in the sense that they suggest that the speaker expects (or expected) that the positive answer is true. This corresponds to the relative positions of negation: “Doesn’t John drink?” comes along with an apparent implicature that the speaker believed or expected that John drinks, whereas “Does John not drink?” does not necessarily suggest this (Ladd, 1981; Romero and Han, 2004).

I have not noticed a systematic difference in Kwak’wala sentences corresponding to this difference in English. Kwak’wala negative questions can, of course, be uttered in contexts in which the speaker believes or expects the positive to be true (e.g. 657, 658c), but the questions themselves do not appear to be such that bias can be inferred the way one can in English.

(659) *Context: We are performing on stage, in front of an audience, and Laura faints.*

k̄əȳose dag^wəda laχ̄^we
 k̄ȳos=e dag^wda l=(a)χ̄^w=e
 none=QUES doctor PREP=ACC.3MED=QUES
 “Are there any doctors here?” (Lit: “Are there no doctors here?”)

(660) k̄iyosas siʔsasəṃ
 k̄yus=a=s s̄ȳ-sasm
 none=ques=2 REDUP-child
 “Do you have children?”

When asked whether (660) sounds like the speaker has expectations about whether or not the answerer had children, a speaker said that it did not, that this was “just a question”.

Negative questions with =ʔm seem to have the same “not yet” interpretation that assertions exhibit.

- (661) kism'eʔe ləʔeʔida waci
 kis=**ʔm**=a=i l-wiʔ=i=da was-hi
 not=VER=QUES=3DIST PREP=into.house=3DIST=DET dog-NMZ
 “Didn’t the dog go inside yet?”

Hall (1888a, p. 76) has another example of a negative question that appears to contain =ʔm.¹³

- (662) kəyosma gaʔaʔa
 kyus=**ʔm**=a gaʔa=a
 none=VER=QUES come=QUES
 “Has no one arrived?” (Hall, 1888a, p. 76)

I think it might be reasonable to suggest that this is the negation+ʔm “not yet” question: “Has no one arrived yet?” In Hall’s other example of a negative question (663), where a “not yet” interpretation would be less likely, the =ʔm does not occur.

- (663) kəyosas ʔabəls
 kyus=a=s ʔabls
 none=QUES=2 apple
 “Have you any apples?” (Hall, 1888a, p. 76)

Boas et al. (1947, p. 291) note a turn of speech by which emphatic positives are expressed as negative questions; some of these lack =ʔm (664) and some have =ʔm (665).

- (664) ʔiʔsəʔe gəltəʔa
 ʔiʔs=a=i gəltə=a
 not=QUES=3DIST tall=QUES
 “Isn’t it long!” (meaning “It is very long.”) (Boas et al., 1947, p. 291)

- (665) ʔiʔsmas baqʷəʔidaʔa
 ʔiʔs=**m**=a=s baqʷl-xʔida=a
 not=VER=QUES=2 sleepy-CHANGE=QUES
 “Are you not sleepy!” (meaning “You are very sleepy”) (Boas et al., 1947, p. 291)

I don’t think this is an “affirmative” usage of =ʔm parallel to its usage in affirmative answers; this positive meaning seems to be there whether =ʔm occurs (665) or does not occur (664). I

¹³Strictly speaking, he spelled it “ma”, as a separate word, but Hall systematically renders preglottalized resonants as a word boundary plus a plain resonant.

think it may just be that the “emphatic” negative questions with $=\lambda m$ might also have a time contrast meaning, possibly something like “already” or “just now” (that is, something like the negation of “not yet”).

So it appears that, although some $=\lambda m$ -less negative questions are biased, the presence and absence of $=\lambda m$ does not perfectly align with the absence and presence of bias. Rather, it seems like the presence of absence of $=\lambda m$ simply indicates whether or not it is a “not yet” question, suggesting that the same “blocking” account suggested for assertions in §8.3.4 might apply to questions as well.

8.4.6 Recap

$=\lambda m$ occurs in the vast majority of yes/no questions. When we consider the questions in which $=\lambda m$ does *not* occur, we can observe they occur in roughly four groups: reprise or confirmation questions (“You’re sad?”), questions in which the speaker is putting forward possible answers to a WH question (“Is it a bird? Is it a plane?”), fixed-choice alternative questions (“Is that person male or female?”), and negative questions (“Don’t you like tea?”).

These are all questions for which it would be reasonable to claim that they are not “bipolar”: they do not genuinely ask of the listener which of P or *not* P is true. I consider this more formally in §8.6.2, adopting this for the first three categories of $=\lambda m$ -less question but suggesting that the lack of $=\lambda m$ in negative questions may just be “not yet” conventionalization instead.

8.5 Conventionalization of $=\lambda m$

One difficulty that arises when trying to give a uniform analysis of $=\lambda m$ is that particular combinations of sentential elements and $=\lambda m$ lead to conventionalized, not-entirely-compositional meanings that appear to block other meanings.

For example, we have seen in both assertions (§8.3.4) and questions (§8.4.5) that the combination of negation and $=\lambda m$ results in a non-compositional meaning (“not yet”); it does not simply mean that the sentence is negative and also that a polarity contrast is relevant. While it *is* the case that every “not yet” question involves a polarity contrast – the contrast between the affirmation of a state or action occurring in the future and the denial of it occurring in the present – *ki* $\lambda s=\lambda m$ shows that not every polarity contrast conditions the appearance of $=\lambda m$. While for most other sentences it looks like many kinds of polarity contrasts will condition $=\lambda m$, for a negative sentence only particular kinds of polarity contrast – in particular, the “not yet” contrast – will condition $=\lambda m$.

We can also see this when we consider “exhaustive numeral” sentences. When the predicate of the sentence is a numeral, the predicate-associating exclusive operator (*ʔo-*) is not necessary, and the addition of *=ʔm* alone induces an “only *N*” reading.

(666) a. ʔəʎəbuwuχda kəʎəʎəga ʎəχwada
 ʔʎbu=uχ=da kʎʎəga ʎa=χwə=da
 seven=3MED=DET crow PREP=ACC.3MED=DET
 “There are seven crows over here,”

b. yudəχw[̣]m[̣]is ʎəχada
 yudχw=[̣]m[̣]=is ʎa=χə=da
 three=VER=and PREP
 “...and **only three** over there.”

(667) *Context: I have drawn a “police lineup” of funny characters, one of which is wearing three hats at once.*

a. yudəχw[̣]uχ ʎətəmʎəsa bəg^wanəm
 yudχw=uχ ʎt-(g̃)m-ʎ=sa bk^w-_wanm
 three=3MED hat-face-wear=3POSS man-person
 “That man has three hats.” (Lit: “The man’s hats are three.”)

b. [̣]nəm[̣]uχ¹⁵ ʎətəmʎəsada gəʎtəχst bəg^wanəm
[̣]n[̣]m=[̣]m[̣]=uχ ʎt-(g̃)m-ʎ=sa=da gʎt-_hχst
 one=VER=3MED hat-face-wear=3POSS=DET long-end
 “The tall man **only** has **one** hat.” (Lit: “The tall man’s hats are just one.”)

(668) *Context: I had elicited the first of these as a translation, and the speaker volunteered the second in order to make a joke about Henry VIII.*

a. [̣]nəmuk^wi g̃ənəmeʔs Henry
[̣]n[̣]m-uk^w=i g̃nm=a=aʔ=ʎs Henry
 one-person=3DIST wife=POSS=INVIS=3POSS Henry
 “Henry has one wife.”

¹⁵[m] and [ṃ] sound noticeably different, but nonetheless this difference can be difficult to perceive if you are not listening for it. The most telling difference is stress; whereas *nəmúχ* has stress on the second syllable, *n’əṃṃúχ* has stress on the initial syllable.

As the lowest non-zero integer, “one” is not infrequently encountered as *nəṃṃúχ* (“only one”). I think this is the source of the otherwise-unexplained extra *m* in the conjugations of *nəm* in the Kwak’wala introductory textbook series (Powell et al., 1981d, p. 11); these are not just the sentences “I have one...” and “You have one...” but “I have only one...” and “You have only one...”

- b. $\dot{n}\acute{o}muk^w\dot{m}i$ $\check{g}\acute{e}n\acute{a}m\acute{e}\acute{?}s$ Henry
 $\dot{n}\acute{m}-uk^w=\acute{?}m=i$ $\check{g}nm=a=a\acute{?}=s$ Henry
one-person=VER=3DIST wife=POSS=INVIS=3POSS Henry
 “Henry **only** has **one** wife.”

This is not an “exactly *N*” reading; $=\acute{?}m$ is only used for lower-than-expected rather than higher-than-expected values.

- (669) a. $m\acute{a}\acute{?}l\acute{o}\acute{?}u\check{x}$ $\check{x}aqa\check{x}sa$ $\acute{w}a\acute{c}i\check{x}$
 $m\acute{?}l=a=u\check{x}$ $\check{x}aq=a=q=sa$ $\acute{w}as-hi=q$
 two=QUES=3MED bone=a=VIS=3POSS dog-NMZ=VIS
 “Does the dog have two bones?”

- b. ✗ $\acute{k}i$, $yud\acute{x}^w\dot{m}u\check{x}...$
 $\acute{k}i$, $yudx^w=\acute{?}m=u\check{x}...$
 no, **three=VER=3MED**
 Intended: “No, there are exactly three.”

If a numeral sentence answers a yes/no question in the affirmative, $=\acute{?}m$ does *not* appear.¹⁶

(670) *Context: There is a drawing of a canoe, with three seals peaking out of it.*

- a. $yud\acute{x}^w\acute{o}\check{x}da$ $mig^wat\ la$ \check{x}^wa $x^wak^w\acute{a}na\check{x}$
 $yudx^w=a=u\check{x}=da$ $mig^wat\ la$ \check{x}^wa $x^wak^wna=q$
 three=ques=3MED=DET seal PREP ACC.3MED canoe=VIS
 “Are there three seals in the canoe?”

- b. ✗ $yud\acute{x}^w\dot{m}u\check{x}...$
 $yudx^w=\acute{?}m=u\check{x}$
 three=VER=3MED
 Intended: “There are three.”

- c. ✓ $yud\acute{x}^wu\check{x}da$
 $yudx^w=u\check{x}=da$
 three=3MED=DET
 “There are three.”

¹⁶It is also interesting that neither of these questions received $=\acute{?}m$, despite being yes/no questions. It could be that here, as well, the numeral+ $\acute{?}m$ combination results in an exclusive reading that the speaker wished to avoid. On the other hand, I suspect that these questions, when elicited in the first place, were interpreted as confirmation questions (§8.4.2), so perhaps it was for that reason that they did not receive $=\acute{?}m$.

(671b) illustrates that it is not that this sentence is not an affirmative answer or that you cannot answer ?əm (“yes”), it is just that the numeral sentence itself does not receive $=\text{?m}$.

(671) a. mə?lo?o?da ?aqa?sa ?aci
 m?l=a=u?da ?aq=a=q=sa $\text{?as-}_h\text{i}$
two=QUES=3MED=DET bone=a=VIS=3POSS dog-NMZ
“Does the dog have two bones?”

b. ✗ mə?lmu?
 m?l=?m=u?
two=VER=3MED
Intended: “Yes, there are two.”

c. ✓ ?əm, mə?lu? ?aqa?sa ?aci
 ?m, m?l=u? ?aq=a=q=sa $\text{?as-}_h\text{i}$
VER, two=3MED bone=a=VIS=3POSS dog-NMZ
“Yes, the dog has two bones.”

This means that just having a polarity contrast in the discourse cannot be a sufficient condition for $=\text{?m}$. This is problematic for a formalized account of $=\text{?m}$: if $=\text{?m}$ is itself the generator of bipolar alternatives, then its presence in these questions and absence in these answers should predict incongruence.

8.6 Formal semantics of $=\text{?m}$

Although it is somewhat conventionalized in a few sentence types, we can otherwise observe that $=\text{?m}$ occurs quite systematically in contexts where a bipolar alternative set is relevant to the discourse, and systematically *does not* occur in contexts where it would be reasonable to suppose that the discourse is *not* furnishing a bipolar alternative set.

In the discussion that follows, I will propose that $=\text{?m}$ indicates the discourse-relevance of a polarity contrast, and explore some of the consequences of this account.

8.6.1 Formal semantics of =?m in assertions

8.6.1.1 *Verum* and certainty

Although =?m is the means by which Kwak’wala marks *verum* focus, it is clear that the account of Romero and Han (2004) will not work for Kwak’wala =?m.

In Romero and Han (2004), they posit an operator VERUM wherein VERUM(*P*) means something like “I am sure that we should add the proposition *P* to the common ground”.

There are some problems with this in Kwak’wala.¹⁷ For one, it is not at all clear why answers to yes/no questions would be any more certain than the same answer to a WH question.

- (672) a. m̌ačalida?
“What’s that? (pointing way over there)”
- b. p̌ə̌λida.
“That’s a plane.” (Powell et al., 1981a, p. 10) (=607)

- (673) a. p̌ə̌lam̌ə̌ʔeda.
“Is that a plane?”
- b. p̌ə̌lam̌ida.
“Yes. That’s a plane.” (Powell et al., 1981a, p. 10) (=608)

The behavior of =?m in questions also poses a problem for this. The effect of VERUM in an English yes/no question is supposed to follow from the question denoting {VERUM(*P*), ¬VERUM(*P*)}, that is, {“I am sure that we should add *P* to the common ground”, “I am not sure that we should add *P* to the common ground”}. Even if this *does* predict the usage of English VERUM in questions, the problem arises that =?m simply does not have the same distribution in questions. =?m in questions does not have any particularly “marked” meaning compared to a regular yes/no question – =?m questions are the regular yes/no questions – and some questions in which English VERUM would be appropriate are distinguished in Kwak’wala by the *lack* of =?m.

- (674) *Context: We are playing “drawing straws”; I have in my hand three straws, one shorter than the rest, we are each trying not to pick the short straw. I ask who got the short straw. The speaker announces that I have it, and then asks a confirmation question.*

¹⁷Issues also arise when applying this account to English (Gutzmann and Castroviejo Miro, 2011; AnderBois, 2011).

- a. suʔəm ʔəʁnug^wasa
 su=ʔm ʔʁ-nuk^w-_wad=sa
 be.2=VER do-have-REL=OBL
 “You’re the one who got it [the short straw].”
- b. loʁase ʁa ʔəmabidu ʔ^wəʁʁloʔ?
 la-w-ʁ=as=e ʁa ʔma-bidu ʔ^wʁ-ʁʁw-aʔ?
 go-out-obtain=2=QUES ACC small-DIMIN grow-branch-NMZ?
 “Did you get the short straw?” (=644)

This is a context in which English SA would be possible, and to my ear preferable, but as a “reprise” question it lacks =ʔm.

In general, any account in which the meaning of English SA in both assertions and questions is achieved by a uniform mechanism (e.g. Creswell, 2000; Romero and Han, 2004; Gutzmann and Castroviejo Miro, 2011) will not work for =ʔm, given that English SA and =ʔm have (roughly) similar distributions in assertions but quite different distributions in questions.

8.6.1.2 Polarity asymmetry

One of the most salient properties of =ʔm is its asymmetry: it will occur in positive questions and answers, but its occurrence in negative questions and answers is restricted.

In particular, we can observe that =ʔm appears when contrasting an affirmative sentence to a discourse-relevant negative, but does not appear when contrasting a negative sentence to a discourse-relevant positive.

- (675) a. ʔiyosən x^wənuk^wa
 “I don’t have any kids”
- b. x^wənuk^wada^mi Jon
 “But Jon does.” (=628a)
- (676) a. x^wənuk^wadi Jon,
 “Jon has kids”
- b. ʔiyostən sasəma.
 “But I don’t.” (=628b)

There are four possibilities that come to mind:

1. =ʔm is itself a positive polarity item.

2. $=\lambda m$ and negation occupy the same syntactic “slot” and therefore exclude each other.
3. $=\lambda m$ and negation are both generators of bipolar alternatives, and therefore $=\lambda m$ is redundant in negative sentences.
4. $=\lambda m$ is a “double negative”, indicating a polarity contrast with a discourse-relevant negative.¹⁸

All four of these, however, are rendered problematic by the variety of negative sentences that $=\lambda m$ *does* appear in, including “not yet” sentences and negative additive sentences (§7.2.5). These explanations would not manage to distinguish which negative sentences $=\lambda m$ does and does not occur in.

For the first three of these possibilities, this is fairly obvious – each would predict that $=\lambda m$ should not occur in any negative sentences at all. For the last, it is worth looking at this in greater detail.

It would appear from (675-676) that $=\lambda m$ only occurs in negative-to-positive contrasts, but this is not really so; it is just that only some *particular* positive-to-negative contrasts receive $=\lambda m$.

(677) $\dot{k}iyos\dot{m}\grave{a}n\ la\ si\lambda sas\grave{a}ma$
 “I don’t have any kids yet.” (=635)

$=\lambda m$ occurs in all “not yet” sentences, and the polarity contrast that all “not yet” sentences have in common is the contrast between the reference time in which P is not true (“I don’t have kids”) and a time beyond the reference time in which P is true (“I will have kids in the future”). This involves a polarity contrast – in the terminology I will adopt in §8.7.1, a “complex bipolar contrast” – and moreover it is a contrast between a negative sentence and a discourse-relevant positive sentence: in the terms above, a positive-to-negative contrast.

We can also see $=\lambda m$ occurring with negative additive sentences, as in (678); $=\lambda m$ does not appear to be sensitive to polarity in additive sentences, occurring whether or not the sentence is positive (§7.2.5).

¹⁸What a “discourse-relevant negative” could be is an additional problem, since in general, the objects that we represent the focus-relevant aspects of discourse with – usually, sets of propositions – are not themselves the sort of thing that is positive or negative. The theoretical object that represents this aspect of discourse – the QUD, C , etc. – usually does not contain the sentence “I don’t have any kids” but the proposition corresponding to it. If a proposition represents a set of possible worlds, then there is nothing to distinguish positive propositions from negative propositions. So, if discourse particles can themselves be sensitive to a discourse element of a particular polarity, this suggests that variables like C actually contain sets of *linguistic* objects.

- (678) a. $\text{k}i\text{ʔs}\text{ʔ}\text{ə}m\text{x}\text{ə}\text{ʔ}\text{ə}n$ $k\text{ə}l\text{x}a$
 $\text{k}i\text{ʔs}=\text{ʔ}m=\text{x}\text{ə}=\text{n}$ $kl\text{x}a$
not=VER=ADD.FOC=1 roll
 “I **don’t** drive **either**.”

In the account of additives I will put forward in §8.7.2, this would likewise be a negative utterance contrasting with a positive.

So while it would be potentially theoretically interesting,¹⁹ I do not think that $=\text{ʔ}m$ is itself polarity-sensitive; I think, rather, that it is just that the combination of negation and $=\text{ʔ}m$ has developed a more specific meaning, and this meaning blocks the co-occurrence of negation and $=\text{ʔ}m$ in cases where this more-specific meaning would not be appropriate.

8.6.1.3 $=\text{ʔ}m$ as a focus variable?

I therefore adopt a more straightforward account of $=\text{ʔ}m$ in assertions, where $=\text{ʔ}m$ just presupposes that there is a discourse-relevant polarity contrast, regardless of the “direction” of that contrast.

The most pressing question regarding its implementation, however, is whether $=\text{ʔ}m$ represents a *focus* or a *focus operator*. Is $=\text{ʔ}m$:

1. a bipolar focus variable of the sort seen in §5.4 (e.g., AFF_F)?
2. an operator akin to the additive operator, which presupposes that the discourse variable C has a particular shape?

Returning for a moment to the model in Chapter 5, determining the congruence presupposition of a sentence is handled by two elements, a focus variable and a speech-act operator SAY. Which element in the sentence is the focus variable determines what that sentence’s F-closure is, and SAY introduces a presupposition that all discourse-relevant alternative sets are subsets of the F-closure of the sentence.

In §5.4, I discussed the generation of bipolar O- and F-closures. Since all nontrivial existential closures require a variable element, producing a bipolar F-closure requires a bipolar F variable, which I called AFF_F , the focused affirmative particle.

¹⁹An account in which $=\text{ʔ}m$ was sensitive to the polarity of prior discourse objects would be theoretically interesting in that it would suggest that speakers were not keeping track of *propositions*, per se, when calculating focus. If we take propositions to be sets of possible worlds, they are not the sort of thing that has a polarity; linguistic objects (e.g. clauses, sentences, utterances) can be positive or negative, but sets of possible worlds are not.

$$(679) \quad \llbracket \text{AFF}_{F_i} \rrbracket^g \stackrel{df}{=} \begin{cases} g(i) & \text{if } g(i) \in \{\lambda p.p, \lambda p.\neg p\} \\ \lambda p.p, & \text{otherwise} \end{cases}$$

SAY_i(AFF_{F_i}(P)) just meta-asserts that the discourse variable *C* contains {*P*} but meta-presupposes that *C* contains {*P*, ¬*P*}. Since this is the condition under which =*ɔm* occurs in assertions, the obvious conclusion to draw is that =*ɔm* is the realization of AFF_F.

A potential problem for this account, however, lies in the kind of conventionalization we see in §8.5. In some sentences, =*ɔm* contributes a very particular reading, like in exclusive numeral sentences where the appearance of =*ɔm* alone conditions an exclusive reading. Even when numeral sentences are used as affirmative answers, they do not receive =*ɔm*, presumably lest they receive a spurious exclusive reading. However, such sentences nonetheless need to achieve the proper congruence presupposition, and therefore even =*ɔm*-less affirmative answers need AFF_F. So there must be a phonologically null AFF_F in these sentences.

The problem arises due to this: if there is a phonologically null AFF_F, and also one phonologically realized as =*ɔm*, why is =*ɔm* ever obligatory? A maxim of “Maximize Presupposition” will not achieve this; both of these versions of AFF_F result in the same presupposition. A maxim of “Avoid Ambiguity” might suffice; using the null AFF_F when the overt version is appropriate leads to an ambiguity regarding whether you mean to presuppose a polarity contrast or not. However, an exchange like the one below is not genuinely ambiguous; having an overt =*ɔm* in (680b) does not actually disambiguate anything.

(680) a. pə́lamə́ɔeda.

“Is that a plane?”

b. pə́lamida.

“Yes. That’s a plane.”

(Powell et al., 1981a, p. 10) (=608)

There is another reason for not considering =*ɔm* the realization of AFF_F: that it does not seem to occur in embedded clauses.²⁰

²⁰I have collected various sentences in which =*ɔm* appears in an embedded clause, although they are always cases in which =*ɔm* conventionally appears with an operator like *hig-*, *ɔo-*, or *kíɔs*. I have not encountered =*ɔm* in embedded clauses as an expression of focused affirmative polarity, which is what we would expect if =*ɔm* were really AFF_F.

(681) a. \check{x} us \acute{k} əyosla \check{x} sasəməʔs Jon, ləməʔnʔs ga \check{x} λasa
 \check{x} =us \acute{k} yus=la \check{x} sasm=a=aʔ=s Jon, l=ʔm=nʔs ga \check{x} =λ=asa
ACC=HYP none=HYP offspring=a=INVIS=3POSS Jon, then=VER=1INCL come=FUT=OBL
nənq̄uʔumas
n-naq-humas
REDUP-consume-NMZ
‘‘If Jon doesn’t have kids, then we’ll bring liquor.’’

b. \check{x} us sasəmnuk^wi Jon, ləməʔnʔs ga \check{x} λasa poʔp
 \check{x} =us sasm-nuk^w=i Jon, l=ʔm=nʔs ga \check{x} =λ=asa poʔp
ACC=HYP offspring-have=3DIST Jon, then=VER=1INCL come=FUT=3POSS pop
‘‘If he does have kids, then we’ll bring pop.’’

Since ‘‘if’’ clauses are clauses, and like other clauses would have a ‘‘polarity’’ projection of some sort, then if =ʔm were the focused polarity particle it should appear in the ‘‘if’’ clause of (681b). Since it does not, this suggests that =ʔm does not really have the same distribution as AFF and NEG, making it unlikely that it is just the focused version of AFF.

8.6.1.4 =ʔm as a focus operator?

I think, therefore, that it is worth exploring option 2: that =ʔm is a focus operator rather than a focus. That is to say, that AFF_F is always phonologically null, and =ʔm is an operator that presupposes something about the sentence, the context, or the relationship between them.

For example, we might propose that =ʔm is an overt focus operator similar to the additive operator, that just introduces a presupposition that $\bigcup C$ contains the negation of its prejacent.

(682) If $\alpha = [=ʔm \beta]$, then

$$\llbracket \alpha \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} \llbracket \beta \rrbracket^{g,C}, & \text{if } \exists p \in \bigcup C [p = \neg \llbracket \beta \rrbracket^{g,C}] \\ \text{undefined, otherwise} \end{cases}$$

This would suffice for some of the more straightforward examples of =ʔm in answers and contrast, but it would have trouble with contrasts like those in (683) and (684).

(683) a. \acute{k} iyosən x^wənuk^wa
‘‘I don’t have any kids’’

b. x^wənuk^wada \acute{m} i Jon
‘‘But Jon does.’’ (=628a)

- (684) a. $\dot{k}is\acute{e}n \quad \text{?}\acute{e}\check{x}\text{?}exsda \quad q\acute{e}n \quad \check{g}\acute{o}lq\acute{e}\text{?}$
 $\dot{k}is=\acute{n} \quad \text{?}\acute{x}\text{-}_h\text{?}exsda \quad q=\acute{n} \quad \check{g}\acute{l}q=\acute{a}=\acute{a}\text{?}$
 not=1 do-want for=1POSS swim=\acute{a}=\acute{INVIS}
- “I don’t like (lit: want) to swim...”
- b. $\text{?}ix\text{?}ak\text{?}\acute{e}m\check{x}\acute{e}n \quad \lambda\acute{a}\check{x}\acute{a} \quad \acute{w}\acute{a}p, \quad q\acute{e}n \quad na\check{x}\text{?}id\acute{e}\text{?} \quad \check{x}\acute{a} \quad \acute{w}\acute{a}p$
 $\text{?}ix\text{?}ak=\text{?}m=\check{x}=\acute{n} \quad \lambda=(\acute{a})\check{x}\acute{a} \quad \acute{w}\acute{a}p, \quad q=\acute{n} \quad naq\text{-}x\text{?}id=\acute{a}=\acute{a}\text{?} \quad \check{x}\acute{a} \quad \acute{w}\acute{a}p$
 like=\acute{VER}=\text{??}=1 CONN=\acute{ACC} water, for=1POSS drink-CHANGE=\acute{a}=\acute{INVIS} ACC water
- “I do, however, like water, for drinking the water.”

The presuppositions would not be satisfied in this context; for example, in (683) there is nothing in C corresponding to the negation of the prejacent proposition P of $x^w\acute{e}nuk^w\acute{a}d\acute{a}m\acute{i} \text{ Jon}$, that Jon has kids. There *is* a polarity contrast here, but it is not the only contrast in the sentence. Basically, (682) would need to presuppose not that $\neg P$ is in $\bigcup C$, but that there exists an x such that $\neg\llbracket P \rrbracket^{g \cup \{i,x\}}$ is in C , for the i that indexes “Jon $_{F_i}$ ”. This is not, however, information that the $=\text{?}m$ in (682) would reasonably have access to. Indeed, the “double-binding” problem (§5.6.1) would constrain the $=\text{?}m$ in (682) from ever having this access, since it would involve quantifying into an index that is already bound (cf. Heim, 1988).

Put another way, the operator in (682) cannot always assume that C will contain the negation of its prejacent. It *can* assume that the F-closure of its prejacent will contain the negation of its prejacent, but it does not have enough information to construct this F-closure, because that would potentially require access to all the O- and F-indices in the sentence.

There is only one operator that would reasonably have enough information to make the right presupposition: SAY. We could, then, implement $=\text{?}m$ as a variant of SAY that makes the appropriate presupposition (685).

(685) If $\alpha = [=\text{?}m_{j_1, j_2, \dots, j_m}^{i_1, i_2, \dots, i_n} \beta]$, then

$$\llbracket \alpha \rrbracket^{g,C} \stackrel{df}{=} \begin{cases} \llbracket \text{SAY}_{j_1, j_2, \dots, j_m}^{i_1, i_2, \dots, i_n} \beta \rrbracket^{g,C}, & \text{if } \forall q \in \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n}^g [\exists p \in \llbracket \beta \rrbracket_{i_1, i_2, \dots, i_n, j_1, j_2, \dots, j_m}^{g,C} \\ & [p = \neg q]] \\ \text{undefined,} & \text{otherwise} \end{cases}$$

I describe it here in terms of SAY, to highlight the sole additional contribution of $=\text{?}m$: the presupposition that for every member of the O-closure of the prejacent, there exists a member of the F-closure of the prejacent that is its negation.

So if we consider $x^w\acute{e}nuk^w\acute{a}d\acute{a}m\acute{i} \text{ Jon}$, there are two contrasts in this sentence, the contrast between Jon and I, and the contrast between affirmative and positive. The former is represented by the focus variable Jon_F , the latter is represented by the focus variable AFF_F . The operator

$=\lambda m$ – that is, the enhanced version of SAY – does three things.

- Like SAY, it meta-asserts that there exists a member of C that is a subset of the O-closure, which is $\{\lambda w.that\ Jon\ has\ kids\ in\ w\}$.
- Like SAY, it meta-presupposes that all members of C are subsets of the F-closure, which is $\{\lambda w.x\ has\ kids\ in\ w = t \mid x \in D_e, t \in D_t\}$. This is the case; the O-closure that the previous utterance entered into C , *k'iyosən x'wənuks'a* (“I don’t have any kids”), is of this form.
- Unlike SAY, it also makes a presupposition²¹ about the form of the O- and F-closures, that every proposition in $\{\lambda w.that\ Jon\ has\ kids\ in\ w\}$ has a negation in $\{\lambda w.x\ has\ kids\ in\ w = t \mid x \in D_e, t \in D_t\}$. This is also the case.

$=\lambda m$ is therefore *sensitive* to the presence of a polarity contrast, without needing to be the focus variable itself.

Although normal SAY is phonologically null and this special bipolar SAY has a phonological realization, this account does not face the optionality problem that faced the $=\lambda m$ -as-AFF_F account. Since the special polar SAY has an additional presupposition that regular SAY does not, then a “Maximize Presupposition” principle could require the use of $=\lambda m$ when appropriate, although not when its use would create an inappropriate conventional reading.

It may seem strange to have a special, phonologically-realized variant of SAY for this purpose. However, it should be noted that SAY as a “unified” operator is a fiction in any case, only possible because the model in Chapter 5 only needs speech acts to do two things (add the prejacent to C and calculate the congruence presupposition), and all sentences need to do these two things. SAY does not implement all the other things different speech acts need to do; a theory that does implement these things would therefore need a variety of operators that do what SAY does and in addition do something further. That is to say, SAY is just a representation of what every speech operator has in common with respect to focus; it is not a theoretical claim that there only exists one speech operator. So for example, some languages (like, say, Korean) could have an overt morphological distinction between assertive and questioning SAY, some languages (like Kwak’wala) would have an overt morphological distinction between bipolar and non-bipolar SAY (regardless of whether they assert or question), and some languages (like English) would not morphologically distinguish either of these.

²¹This is not, technically, a meta-presupposition in the way I used this terms in §5.3.2, because it does not make a claim about C , but rather about the O- and F-closures.

8.6.2 Formal semantics of $=?m$ in questions

As noted in §5.4, a dilemma regarding the implementation of yes/no questions as Hamblin sets is whether they denote a singleton set $\{P\}$ (Roberts, 2012; Büring, 2003) or a two-member set $\{P, \neg P\}$ (most other works). While these theories end up with similar predictions – Roberts’ semantics of question answering (p. 11-12) treats singleton alternative sets as expressing both positive and negative possibilities – the alternative sets would nonetheless be generated differently; a Roberts-style singleton denotation does not require a *generator* of alternatives the way a WH question does, whereas a bipolar $\{P, \neg P\}$ denotation would require a WH-like generator of alternatives, what I label YN in §5.4.

The Kwak’wala data in §8.4 suggests that there are various possible denotations of yes/no questions: some yes/no questions genuinely express a positive-negative contrast, some yes/no questions do not, and Kwak’wala distinguishes between these morphologically. That is to say, there appears to be a particular morphosyntactic form associated with a question without WH elements, but questions of this form do not all have a uniform semantics. Kwak’wala marks some of these questions using the same marker, $=?m$, that it does to indicate polarity contrast in assertions, and uses it on questions in situations where it seems that the questioner is genuinely asking which of P or $\neg P$ is true.

$=?m$ -less yes/no questions seem to fall into four rough groups:

1. Reprise questions (§8.4.2)
2. “Sample answer” questions (§8.4.3)
3. Fixed-choice alternative questions (§8.4.4)
4. Negative questions (§8.4.5)

I will consider these in more detail in the following sections.

8.6.2.1 Reprise questions

In §8.4.2, I observe that $=?m$ systematically fails to occur in what appear to be “reprise” or “confirmation” questions, and suggest, following Krifka (2013), that these questions represent a *monopolar* alternative set consisting only of the positive alternative, as opposed to a *bipolar* alternative sets that consists of both the positive and negative alternatives.

If this is so, it would require a semantics of questions that would allow this, one in which:

- the compositional semantics of questions can produce distinct denotations for monopolar and bipolar questions, and

- the formal relationship (subsethood, entailment, etc.) that informs our model of discourse moves can differentiate these denotations

For these reasons, I chose in Chapter 5 to represent question denotations as sets of partial answers – that is, as Rooth-Hamblin sets – and the relevant relationship between these as subsethood. I chose these rather than represent question denotations as sets of complete answers – that is, as Groenendijk and Stokhof-style (1984) partitions – and represent the relevant relationship between these as entailment, because this poses a problem when distinguishing monopolar and bipolar questions.

For example, consider the entailment semantics of Roberts (2012), in which a polar question has a singleton alternative set $\{P\}$, and in which an alternative set q_1 entails an alternative set q_2 if and only if a true/false valuation of each proposition of q_1 entails a true/false valuation of each proposition in q_2 . This semantics does not afford us a mechanism to distinguish between monopolar and bipolar questions. The simplest possible alternative set is already bipolar, and adding $\neg P$ to the alternative set $\{P\}$ would be entirely redundant; such sets would not have any additional possibilities for valuation and thus act identically within the system.

So by that definition, the sets in (686a) would be equivalent, as would the sets in (686b).

- (686) a. $\{P\} \Leftrightarrow \{P, \neg P\}$
 b. $\{P, Q\} \Leftrightarrow \{P, \neg P, Q, \neg Q\}$

This is why, in §1.6 and §5.3, I follow Rooth in treating alternative sets as sets of *partial* answers rather than complete answers, and in implementing alternative set relationships in terms of subsethood. This way, the sets in (686a) are not equivalent to each other, allowing monopolar and bipolar questions to have different denotations and discourse contributions. Likewise, the sets in (686b) are not equivalent to each other, allowing denotations and contributions to differ between WH questions and what I call “complex bipolar questions” in §8.7.1.

Using the model in Chapter 5, the difference between “Did Alice order chicken?” and “Alice ordered chicken?” is represented in (687a) and (687b) respectively, differentiated by whether or not the bipolar variable YN is present (§5.4).

- (687) a. $SAY^1(YN_1 \text{ Alice -ed order chicken})$
 b. $SAY(\text{Alice -ed order chicken})$

Recall from §5.4 that YN_1 affirms or denies its complement according to whether $g(1)$ is $\lambda p.p$ or $\lambda p.\neg p$, respectively. Meanwhile, SAY^1 forms the existential closure of its complement by quantifying over all possible values of the appropriate type, and meta-asserts that C contains a question of this form. This amounts to (687a) adding a question to C of the form $\{\text{Alice ordered chicken, Alice did not order chicken}\}$.

Meanwhile in (687b), YN is not present; in its place is the non-variable, non-focused AFF that simply affirms its complement. Since there are no unbound variables in its complement, SAY does not bind anything, with the result that SAY only meta-asserts that C contains a question of the form $\{Alice\ ordered\ chicken\}$.

How does this work for Kwak’wala? The major dilemma that arises in questions is the same as the dilemma that arose for assertions in §8.6.1.3: which of these elements corresponds to $=?m$?

Once again, we might at first consider $=?m$ as the realization of the generator of bipolar alternatives (for questions, YN), that variable that SAY quantifies into in order to create a bipolar O-closure.

$$(688) \quad \llbracket \text{YN}_i \rrbracket^g \stackrel{df}{=} \begin{cases} g(i) & \text{if } g(i) \in \{\lambda p.p, \lambda p.\neg p\} \\ \text{undefined,} & \text{otherwise} \end{cases}$$

A genuinely bipolar question like (689) would contain YN, while a monopolar question like (690) would not.

(689) *Context: We are role-playing different moods and emotions, and this turn is meant to be “angry”, but the player playing the role had forgotten whose turn it is and was not attempting to role-play any emotion. The other player was unsure whether she is actually role-playing anger or whether she has her default expression.*

ławismas?

ławis=?m=a=s

angry=VER=QUES=2

“Are you angry?”

(690) *Context: We are role-playing different moods and emotions; this turn is “sad”. The player playing the role mimes sadness and says that she is very sad. The other player reprises this as a question.*

wosas?

wos=a=s

sad=QUES=2

“You’re sad?”

(=642)

Since the bipolar question contains $=?m$ and the monopolar question does not, a compelling initial hypothesis would be to have YN be phonologically realized as $=?m$ rather than leave it phonologically null. This would suggest the following binding patterns, where SAY¹ in the

former sentence binds $=\lambda m_1$ – that is, YN_1 – and therefore results in a meta-assertion of a bipolar alternative set, whereas SAY in the latter sentence does not bind anything and results in the meta-assertion of a monopolar alternative set.

- (691) a. SAY¹($=\lambda m_1 =a =s$ lawis)
 b. SAY($=a =s$ wos)

However, in §8.6.1.3 I suggested that identifying $=\lambda m$ and the bipolar variable causes a potential problem when considering blocking effects. I proposed an alternative account of $=\lambda m$ that does not have this problem, where $=\lambda m$ is a particular realization of SAY that presupposes that every proposition in the O-closure of the prejacent has a negation in the F-closure of the prejacent. This presupposition would work for bipolar questions as well, without modification. The set in (692a) represents both the O-closure and F-closure of the question in (689); the set in (692b) represents both the O-closure and F-closure of (690)

- (692) a. $\left\{ \begin{array}{l} \lambda w.that\ you\ are\ angry\ in\ w \\ \lambda w.that\ you\ are\ not\ angry\ in\ w \end{array} \right\}$
 b. $\left\{ \lambda w.that\ you\ are\ sad\ in\ w \right\}$

The presupposition of the $=\lambda m$ operator is true of (692a) – for each proposition in the set, there exists its negation – and therefore $=\lambda m$ is appropriate in (689). On the other hand, the presupposition of $=\lambda m$ is not true of (692b) – there is a proposition in the set without a negation – and therefore $=\lambda m$ is inappropriate in (690).

The other benefit of the operator account is that we do not have to say that $=\lambda m$ is ambiguous in assertions versus questions – that is, between representing AFF_F and representing YN_F . Rather, we can just say that $=\lambda m$ requires the F-closure to have a certain shape, regardless of whether that shape is due to AFF_F or YN_F .

8.6.2.2 Sample answer questions

In §8.4.3, we saw an additional kind of question-like sentence that lacks $=\lambda m$, in which a speaker appears to be listing potential answers to a WH question without asserting any of them. It is interesting to observe that in both English and Kwak’wala, this speech act takes the form of an apparent yes/no question, but in Kwak’wala the lack of $=\lambda m$ suggests that these yes/no questions are not genuinely bipolar.

I think this strategy is a special case of a phenomenon mentioned by Roberts (2012, p. 8), when she notes that “at a given point an interlocutor might utter one after the other a number of relevant subquestions to some superquestion, without yet answering any of them”. So that

we have a label for it, let us call this speech strategy **question specification**.

So, if we consider a Roberts-style question hierarchy like the one in (693), each question aside from the terminal questions (the yes/no questions) has potential subquestions: “Who ordered what?” has as a subquestion “What did Alice order?”, “What did Alice order?” has a subquestion “Did Alice order chicken?”, etc.

- (693) • “Who ordered what?”
- “What did Alice order?”
 - “Did Alice order chicken?”
 - “Did Alice order fish?”
 - “What did Bernie order?”
 - “Did Bernie order chicken?”
 - “Did Bernie order fish?”

Question specification is possible for both multiple-WH questions (694a) and single-WH questions (694b).

- (694) a. “Who ordered what? What did Alice order? And what did Bernie order?”
b. “What did Alice order? Did she order chicken? Did she order fish?”

The subsequent questions in (694a) and (694b) are not answers to the original question, but they are not exactly asking a *new* question, either. Rather, I would suggest that the speaker in both (694a) and (694b) is putting forward suggestions regarding the answers (or rather the *form* of answers) that might be relevant to their original queries.

A question arises from this: is the formal relationship between the questions in (694a) the same as the formal relationship between the questions in (694b)?

If we look at the relationship between the alternative sets of “Who ordered what?” and its subquestion “What did Alice order?”, we find that the former (695a) is a superset of the latter (695b).

- (695) a. $\left\{ \begin{array}{l} \text{Alice ordered the chicken} \\ \text{Alice ordered the fish} \\ \text{Chris ordered the chicken} \\ \text{Chris ordered the fish} \\ \dots \end{array} \right\}$
- b. $\left\{ \begin{array}{l} \text{Alice ordered the chicken} \\ \text{Alice ordered the fish} \\ \dots \end{array} \right\}$

That is to say, there are no *additional* alternatives in the subquestion that are not already in the superquestion. The speaker is not asking something new, so much as further specifying what form an answer might take, that it might take the form $\{\lambda w.that\ Alice\ ordered\ x\ in\ w\ | x \in D_e\}$.

If the relationship between “What did Alice order?” and its subquestion “Did Alice order chicken?” is the same, then we would expect “Did Alice order chicken?” to have the Hamblin alternative set in (696), or else it would not be a subset of (695b).

(696) $\left\{ \text{Alice ordered the chicken} \right\}$

As before, the speaker is not asking something new, so much as further specifying what form an answer might take: that it might take the form $\{Alice\ ordered\ the\ chicken\}$.

This would be, like the reprise questions in §8.6.2.1, a monopolar question, and as such does not meet our hypothesized criteria for the appearance of $=\lambda m$.

8.6.2.3 Disjunctive questions

The distribution of $=\lambda m$ in disjunctive questions suggests that Kwak’wala, like English, has two kinds of disjunctive questions:

1. Questions that ask if a disjunction is true or false (“bipolar disjunctive questions”), as in “Do you play guitar or bass?” meaning “Is it the case that you play one of {guitar, bass}?”.
2. Questions that ask which alternative of a disjunction is true (“fixed-choice alternative questions”), as in “Do you play guitar or bass?” meaning “Which of {guitar, bass} do you play?”.

This difference would be implemented in our question model by SAY binding different elements. In the case of the bipolar disjunctive questions (697), SAY would bind the bipolar variable YN.

(697) $SAY^1(YN_1\ \text{you play guitar or bass})$

This is an ordinary bipolar question as considered in §8.6.2.1; the sentence happens to be a disjunction, but the resulting alternatives (that is, the O-closure) are still whether or not it is true:

(698) $\left\{ \begin{array}{l} \lambda w.that\ you\ play\ guitar\ or\ bass\ in\ w \\ \lambda w.that\ you\ do\ not\ play\ guitar\ or\ bass\ in\ w \end{array} \right\}$

Meanwhile, in the fixed-choice alternative question in (699), the disjunctive operator is bound by SAY itself.

(699) SAY¹(you play guitar or₁ bass)

Recall that in §5.2.2.1, the phrase “guitar or bass” represents an indefinite-like variable valued by g ; g can supply any value of the appropriate type to the appropriate index, but the phrase “guitar or bass” is semantically undefined whenever this value is neither *guitar* nor *bass*. The valuations of “guitar or bass” that SAY provides could be anything – guitar, bass, saxophone, chair, cow, moon, etc. – but according to the definition of “or”, any denotation other than the specified choices results in undefinedness. So the resulting O-closure of (699) would be the alternatives in (700).

(700) $\left\{ \begin{array}{l} \lambda w.that\ you\ play\ guitar\ in\ w \\ \lambda w.that\ you\ play\ bass\ in\ w \end{array} \right\}$

In Kwak’wala fixed-choice alternative questions like (701), SAY would bind the conjunction $\lambda w'$ (“and”, “or”, or “with”) whereas in bipolar disjunctive questions SAY would bind YN.

(701) SAY¹(hede?e lə?eda waci?eda **guk**^w lu?₁ helaĥ laĥa **λasanoŷ**)
 “Is the dog in **the house** or **outside**?” (Rough lit: “Is it **the house** where the dog is, or **outside**?”) (=655)

(702) =?m¹(YN₁(?əĥ?eĥsda=as=i ĥa **kafi** lu? helaĥida **diy**))
 “Do you want **coffee** or **tea**?” (=651)

As in the English examples above, the resulting alternative sets are determined by the possible alternatives supplied by the variables bound by SAY. In (701), the alternatives supplied are *the house* and *outside*, resulting in the set in (703). However, in (702), the alternatives supplied are just those supplied by YN, which (as always) are $\{\lambda p.p, \lambda p.\neg p\}$, resulting in the set in (704).

(703) $\left\{ \begin{array}{l} \lambda w.that\ the\ dog\ is\ in\ the\ house\ in\ w \\ \lambda w.that\ the\ dog\ is\ outside\ in\ w \end{array} \right\}$

(704) $\left\{ \begin{array}{l} \lambda w.that\ you\ want\ coffee\ or\ tea\ in\ w \\ \lambda w.that\ you\ do\ not\ want\ coffee\ or\ tea\ in\ w \end{array} \right\}$

Of these, only (704) is bipolar, and so =?m is only appropriate in (702).

8.6.2.4 Negative questions

In contrast to the other $=\text{?}m$ -less questions, the lack of $=\text{?}m$ in negative questions does not, I think, give us much insight into the semantics of negative questions in Kwak’wala. Unlike the other $=\text{?}m$ -less question types (confirmation questions, etc.) I have argued that the lack of $=\text{?}m$ in negative questions may just be a blocking effect by the “not yet” combination, rather than reveal something deeper about the semantics of negative questions.

Another option to explain the lack of $=\text{?}m$ in negative questions could be that negative questions are biased, and biased yes/no questions have a semantics that in some way deviates from the standard binary $\{P, \neg P\}$ semantics (cf. Büring and Gunlogson, 2000; Guerzoni, 2004; Krifka, 2013). Some questions in Kwak’wala are indeed biased in an English-like way; a speaker reported that (705a) sounded like the questioner thought that the listener was a doctor (“He thinks you’re a doctor”), and improvised the continuation in (705b).

- (705) a. $\dot{k}i\text{?}sas$ $dag^wada\text{?}a$
 $\dot{k}i\text{?}s=a=s$ $dag^wada=a$
 not= $QUES=2$ doctor= a
 “Aren’t you a doctor?”
- b. $laxda\text{?}aq^wəs$ dag^wada
 $l=(a)xd\text{?}aq^w=s$ dag^wada
 then= $resemble=2$ doctor
 “I thought you were a doctor!”

However, the presence or absence of $=\text{?}m$ does not systematically correspond to the presence or absence of bias, and I think the bias above can be entirely pragmatic in any case. In the absence of a complicated context – which I did not provide when asking about (705a) – asking if someone is *not* a doctor is rather bizarre in the absence of an expectation that they are a doctor. We can see this even for the “non-biased” negative question in English; for me, except in some rather specific contexts,²² both of the English negative questions in (706) implicate that the speaker expected the listener to be a doctor.

- (706) a. “Aren’t you a doctor?”
 b. “Are you not a doctor?”

So, while it might be tempting to account for the lack of $=\text{?}m$ in these sentences by saying that biased sentences have in their denotation only the expected answer, and are thus monopolar,

²²Say, a context where something (a prize, a scholarship, etc.) is limited to non-doctors, and an administrator must confirm that the applicant is not a doctor.

I think that the bias apparent in Kwak’wala negative questions is a matter of ordinary conversational implicature; it is not necessarily a difference in the way their alternative denotation are generated. It could be that biased questions *do* have a monopolar alternative set, it is just that I do not think the distribution of Kwak’wala =ʔm gives us evidence for it.

8.7 =ʔm in additive and exclusive sentences

As noted in Chapter 7, every additive and exclusive sentence receives an =ʔm.

- (707) **higam**uʃ Masakiyəʃ ʔəʃəla sa ʃətəmʃ
higa=ʔm=uʃ Masakiy=q ʔʃ-la sa ʃt-(ǵ)m-ʃ
only=VER=3MED Masaki=VIS do-ONGOING OBL hat-face-wear
 “**Only** Masaki is wearing a hat.” (=494)

- (708) **ʔoʔəm**ʌən yuʃ loʃ laʃʷa məkola
ʔwa=ʔm=ʌ=n yu=ʌ l=a=uʃ l=(a)ʃʷa mkʷ-ola
so=VER=FUT=1 be=FUT PREP=EMBED=3MED PREP=ACC.3MED round-on.water
 “...I’ll **just** stay here on the island.” (Cranmer and Janzen, 2014) (=490)

- (709) ʔəʃəla**ʔəm**ʃoʃʷ Paʃe sa ʃətəmʃ
 ʔʃ-la=**ʔm**=ʃa=uʃ Paʃe sa ʃt-(ǵ)m-ʃ
do-ONGOING=VER=ADD.FOC=3MED Pat OBL hat-face-wear
 “Pat is **also** wearing a hat.” (=463a)

- (710) **ʔugʷaqam**ən wɛʃ gəwəluʃs
ʔugʷaqa=ʔm=n wɛʃ gʷ-al=uʃs
also=VER=1 can help-ONGOING=2POSS
 “I can help you **too**.” (=467b)

At least in exclusive sentences, this =ʔm seems to be somewhat fossilized, and speakers talk about *higaʔəm* and *ʔoʔəm* as if they are units; I have often heard “Only is *higaʔəm*”, but never encountered a speaker say anything like “Only is *higa*.”

They are not fossilized in the sense of *higaʔəm* or *ʔoʔəm* being inseparable stems reanalyzed as roots; suffixal or enclitic material can come between the root and =ʔm.

(711) **higəʔiʔəm**
hig-_wiʔ=ʔm
only-indoors=VER
 “He/she/it is the **only** one in the house.”

(712) **ʔobuʔaʔəm**
ʔwa=buʔa=ʔm
so=pretend=VER
 “**just** pretending”

However, we can also observe that the exclusive operators²³ have their own =ʔm when they are not the first auxiliary. That is to say, we can observe in (713-714) the =ʔm failing to occur in second position, and occurring on the exclusive operator instead.

(713) *Context: Two origami figures representing children are watching a handful of blue and white origami birds. The white birds and one blue bird are singing. One has asserted that only the white birds are singing; the other disagrees:*

ʔiʔs	higam̩ida	miməlʔstu	çəsq ^w ana	diʔdənχəla
ʔiʔs	higa=ʔm=i=da	m̩y-m̩l-ʔstu	çəsq ^w ana	d̩y-dnχ-la
not	only=VER=3DIST=DET	REDUP-white-eye	bird	REDUP-sing-ONGOING

“The white birds aren’t the only ones singing.”

(714) *Context: The main characters are being warned about an enemy with a body made of stone.*

la	lixaʔəm	ʔəldzi	ʔuχawayas
la	lixa=ʔm	ʔəls- _n i=i	ʔw-χw-a ^y =a=s
now	only=VER	fat-NMZ=3DIST	so-throat-NMZ=A=3POSS

“Only his neck is flesh.” (Boas and Hunt, 1905, p. 151) (=517)

Moreover, *hig-* and *ʔo-* receive =ʔm even if there is already an =ʔm after the first auxiliary. This is good evidence that =ʔm is not the selfsame =ʔm as the one in second position.

²³As we see in Boas and Hunt (1905), *ʔaʔ-* could, and possibly still can, occur without its own =ʔm in some sentence types, although all such sentences had an earlier =ʔm. I have only encountered the *ʔaʔʔəm* form.

(715) lə́m̩i ʔox^wsem̩isuǎ Staceyǎ gigəʔiqəla,
 l=ʔm̩=i ʔwa=xse=ʔm̩=is=uǎ Stacey=q gi-gi-_hiq-la,
 then=VER=3DIST so=still=VER=and=3MED Stacey=VIS REDUP-think-in.self-ONGOING,
 mə́ʔalanawisi hə́meʔʔεʔs
 mə́s-_hat-_hanawis=i hm̩-aỵ=ʔa=aʔ=s
 what-kind-modal=3DIST eat-NMZ=FUT=a=INVIS=3POSS
 “But Stacey is still thinking, I wonder what he’s gonna eat?”

(716) wε, lə́m̩is lixaʔəm̩ ǰ^wəli Həmalakawaỵa.
 wε, l=ṁ̩=is lixa=ʔm̩ ǰ^wl=i Həmalakawaỵa.
 well, now=VER=AND.SO only=VER live=3DIST Həmalakawaỵa
 “Hamalakawaỵa was the only one who was spared (lit: who lived).”
 (Boas and Hunt, 1905, p. 240) (=516)

I have heard speakers sound hesitant before the addition of =ʔm when it is not in second-position, as if they are not certain whether it should remain with the operator, but the examples with *lix-* from Boas and Hunt (1905) confirm the appearance of =ʔm outside of second-position.

I do not think it would always be feasible to treat the appearance of =ʔm on focus operators as being, synchronically, the same utterance-level =ʔm that we saw in §8.3-§8.6.1.3. Nonetheless, the “mystery of =ʔm” remains, and remains interesting: why would =ʔm occur with focus operators to the point that it became permanently attached to them? If =ʔm basically expresses (or expressed) that a polarity contrast is relevant to the discourse, what polarity contrast is relevant to these contexts?

8.7.1 Complex bipolar alternative sets

I will propose below that additive and exclusive sentences both have complex alternative sets that contain both constituent-type contrasts and polarity contrasts. First, however, let us consider what it might mean for a question to be “complex” in this sense.

8.7.1.1 Complex questions and answers

As discussed in Chapter 1 and Chapter 5, this investigation takes focus patterns to be a primary source of evidence for implicit considerations (questions, statements, etc.) in the discourse. The intonations of answers sometimes suggests a different question – often, a more complex one – than the one that was explicitly asked.

- (717) a. Where did the boys go?
 b. MÁRK went to the ZÒO and PÉTER went to the PÀRK.

The intonation of (717b) suggests that it is actually answering a more complex question along the lines of “Which of the boys went where?” or “Where did Mark go, and where did Peter go?” That is, although (717b) follows a question of the form $\{\lambda w.that\ the\ boys\ visited\ x\ in\ w\ | x \in D_e\}$, such as that in (718), its intonation suggests that it is actually answering a more complex question of the form $\{\lambda w.that\ y\ visited\ x\ in\ w\ | x \in D_e, y \in D_e\}$, such as that in (719).

(718) $\left\{ \begin{array}{l} \text{The boys visited the } \mathbf{zoo} \\ \text{The boys visited the } \mathbf{park} \\ \text{The boys visited the } \mathbf{exhibition} \\ \dots \end{array} \right\}$

(719) $\left\{ \begin{array}{l} \mathbf{Mark} \text{ visited the } \mathbf{zoo} \\ \mathbf{Mark} \text{ visited the } \mathbf{park} \\ \mathbf{Mark} \text{ visited the } \mathbf{exhibition} \\ \mathbf{Peter} \text{ visited the } \mathbf{zoo} \\ \mathbf{Peter} \text{ visited the } \mathbf{park} \\ \mathbf{Peter} \text{ visited the } \mathbf{exhibition} \\ \dots \end{array} \right\}$

I do not mean to imply that this answering strategy is unusual or out of the ordinary; it is often the case that no member of the explicit question’s alternative set is an adequate answer, and answerers must often give answers that, strictly speaking, would be in the alternative set of a more complex question.

Let us call this kind of discourse move – acting as if a more complex question was asked – **elaboration**. In §8.3.5, we saw an elaboration in which an assertion (639a) was treated as if raising a bipolar question (cf. Ginzburg, 1996); this was a **bipolar elaboration** since the implicit question contained an additional bipolar contrast compared to the overt assertion. Here, we see a **WH elaboration** (719) of a single-WH question (718). The implicit question adds an additional constituent contrast to the original overt question, in this case forming a multiple-WH question.

8.7.1.2 Complex bipolar questions and answers

Multiple-WH questions are not the only possible results of WH elaboration, however; we can also see WH elaborations of yes/no questions (720-721).

- (720) a. Do you like ice cream?
 b. I DÓN'T like CHÒCOLATE, but I DÓ like VANÌLLA.

- (721) a. Were the Clintons senators?
 b. HÍLLARY WÀS a senator, but BÍLL WÀSN'T a senator.

Meanwhile, we can see bipolar elaborations of WH questions (722-723) as well.

- (722) a. What ice creams do you like?
 b. I DÓN'T like CHÒCOLATE, but I DÓ like VANÌLLA.

- (723) a. Which Clintons were senators?
 b. HÍLLARY WÀS a senator, but BÍLL WÀSN'T a senator.

Like the pair in (717), these intonational patterns suggest that the answers correspond to more complex questions than the original questions given. Although the original questions only ask for a polarity answer or a constituent answer, the answerer is offering constituent/polarity *pair-list* answer.

For example, although the answer in (720b) follows a question like $\{\lambda w.I \text{ like ice cream in } w = x \mid x \in D_t\}$ (expanded in 724), its intonation suggests a question like $\{\lambda w.I \text{ like } y \text{ ice cream in } w = x \mid y \in D_{et}, x \in D_t\}$ (expanded in 725).

- (724) $\left\{ \begin{array}{l} \text{I do like ice cream} \\ \text{I don't like ice cream} \end{array} \right\}$

- (725) $\left\{ \begin{array}{l} \text{I do like vanilla ice cream} \\ \text{I don't like vanilla ice cream} \\ \text{I do like chocolate ice cream} \\ \text{I don't like chocolate ice cream} \\ \text{I do like pistachio ice cream} \\ \text{I don't like pistachio ice cream} \\ \dots \end{array} \right\}$

I will call implicit questions of this form **complex bipolar questions**, and the answers that answer them (e.g., 720b, 721b, 722b, 723b) **complex bipolar answers**.

8.7.1.3 The structure of complex bipolar alternative sets

As noted in §8.6.2, the ability to express complex bipolar alternative sets is one of the reasons I chose a Rooth-Hamblin partial-answer semantics rather than a Groenendijk and Stokhof (1984) complete-answer semantics. For Roberts (2012), since bipolar alternative sets are all singleton sets, the addition of another alternative-generating element (such as a focus) would result in an alternative set $\{P, Q, R, \dots\}$ that does not differ from the alternative set that the focus would generate on its own. (That is to say, complex bipolar questions would have the same alternative sets as ordinary WH questions, and complex bipolar answers would have the same focus alternative sets as ordinary answers to WH questions.) Indeed, any theory built on entailment of complete answers would have this difficulty, as complete answers to $\{P, Q, \dots\}$ and $\{P, \neg P, Q, \neg Q, \dots\}$ would mutually entail each other.

A Hamblin-style semantics does not have a problem differentiating between these; $\{P, Q, \dots\}$ and $\{P, \neg P, Q, \neg Q, \dots\}$ are not equivalent in this model, so adopting a Hamblin semantics for alternative sets, as Büring (2003), Rullmann (2003), and Wilder (2013) do, potentially allows WH and complex bipolar alternative sets to differ.²⁴

8.7.1.4 “Flat” or “nested” alternative sets?

Roberts (2012) and Büring (2003) also differ according to whether complex alternative sets have “flat” structures – that is, all possible alternatives in the same set – or “nested” structures, in which alternatives are grouped into subsets according to a superquestion-subquestion hierarchy, where alternatives in the same subsets are answers to the same subquestions.

- (726) a. Q: “Who ate what? What did Fred eat?”
b. A: “FRED_T ate the BEANS_F.”

In Büring’s semantics, the answer in (726b) corresponds to a complex alternative set like that in (727).

²⁴As it happens, Büring (2003) maintains Roberts’ (2012) singleton $\{P\}$ semantics for yes/no questions and their answers, despite the shift to a Hamblin semantics; Rullmann (2003) and Wilder (2013), on the other hand, restore the Hamblin-style bipolar semantics.

$$(727) \left\{ \begin{array}{l} \left\{ \begin{array}{l} \lambda w.that \textit{Fred ate the beans in } w \\ \lambda w.that \textit{Fred ate the chicken in } w \\ \dots \end{array} \right\} \\ \left\{ \begin{array}{l} \lambda w.that \textit{Mary ate the beans in } w \\ \lambda w.that \textit{Mary ate the chicken in } w \\ \dots \end{array} \right\} \\ \left\{ \begin{array}{l} \lambda w.that \textit{Joey ate the beans in } w \\ \lambda w.that \textit{Joey ate the chicken in } w \\ \dots \\ \dots \end{array} \right\} \end{array} \right\}$$

This structure corresponds both to the superquestion-subquestion sequence and to the accentual contours of the contrastive topic and focus.

At least to my ear, however, I do not notice the same correspondences for complex bipolar questions. Unlike the multiple-WH patterns observed in Jackendoff (1972) and Büring (2003), complex bipolar answers seem to me to have the same accentual contours regardless of the superquestion-subquestion hierarchy.

- (728) a. “Do you like ice cream? Which flavors do you like? Which don’t you like?”
 b. “I DÓN’T like CHÒCOLATE, but I DÓ like VANÌLLA.”

- (729) a. “What ice creams do you like? Do you like chocolate? How about vanilla?”
 b. “I DÓN’T like CHÒCOLATE, but I DÓ like VANÌLLA.”

- (730) a. “Were the Clintons senators? Which Clinton was a senator? Which wasn’t?”
 b. “HÍLLARY WÀS a senator, but BÍLL WÀSN’T a senator.”

- (731) a. “Which Clintons were senators? Was Hillary a senator? How about Bill?”
 b. “HÍLLARY WÀS a senator, but BÍLL WÀSN’T a senator.”

Rather, it seems to be the relative order of, or structural relationship between, the polar-focus element and the constituent-focus element that determines the accentual contours. This leaves open the question of which element is the contrastive topic. Is it the one that corresponds to the pragmatic topic, or the one that corresponds to the contrastive-topic-like accent? Or are all of these just foci?

This is one of the reasons I couch discussion of these questions and their answers in terms of “flat” alternative sets rather than “nested” alternative sets. Adopting a “nested” semantics leads to a question of whether (732a) or (732b) is appropriate for any given complex bipolar

answer.

- (732) a. $\{\{P, \neg P\}, \{Q, \neg Q\}, \dots\}$
b. $\{\{P, Q, \dots\}, \{\neg P, \neg Q, \dots\}\}$

The two English criteria – the questions asked and the accentual contours used – do not necessarily give the same results when applied to complex bipolar answers, and Kwak’wala does not, so far as I know, distinguish contrastive topic and focus anyway, so I do not have particularly strong reasons to prefer one of these to the other.

So instead of considering, for each complex bipolar sentence, whether (732a) or (732b) is appropriate, I just adopt a Roberts-style flat structure (e.g., $\{P, \neg P, Q, \neg Q, \dots\}$). In §5.5, I offer a potential way to maintain a Büring-style congruence model even with a flat semantics, but which does not complicate the presentation of the alternative sets in instances where we are unsure of which focus (if any) is a contrastive topic.

8.7.1.5 A puzzle regarding complex bipolar questions

It is interesting to observe that complex bipolar questions are difficult to express; there does not appear to be, in English or Kwak’wala, a straightforward way to ask these as questions. That is, while English, at least, can express a WH/WH pair-list question by using a special construction (a multiple-WH question), neither language appears to have any sort of dedicated construction for this.²⁵

It seems like this should at least be possible: even if both kinds of questions conflict with each other, somehow, in or near the syntactic “C” head in English syntax, why is it not possible to leave the lower WH word *in situ* as we do for multiple-WH questions? That is, why is (733c) not a question that can mean “Which flavors do you like, and which don’t you like?”

- (733) a. Do you like ice cream?
b. Who likes which flavors?
c. *Do you like which flavors?

It also at least seems like it should be possible in Kwak’wala. Although multiple WH questions would be blocked, since both WH elements would have to occupy the same position (the

²⁵It is important to keep in mind, regarding “question under discussion” theories, that the “questions” invoked are abstract semantic objects, not necessarily natural-language questions. Particular utterances – questions, disjunctions, etc. – express these objects, but not every discourse-relevant alternative set will correspond to a natural-language question. Kwak’wala, for example, is among those languages that cannot directly express multiple-WH questions, but the corresponding theoretical objects would be as necessary to model Kwak’wala discourse as they are to model English discourse.

predicate), there is no particular reason to believe that $=\lambda m$, which we have seen marks questions as bipolar, ever occupies this position. Yet WH questions with $=\lambda m$ do not seem to express anything at all.

- (734) ✗ $\lambda \text{əŋ}^{\text{w}}\text{amida}$ $\text{dulow}\epsilon?$
 $\lambda \text{ŋ}^{\text{w}}\text{a}=\lambda \text{m}=\text{i}=\text{da}$ $\text{dulowa}=\text{a}?$
 who=VER=3DIST=DET win=INVIS
 Intended: “Who did and didn’t win?”

There would, I think, be two basic ways of explaining this lack: either a complex bipolar question is not a pragmatically possible formal object, or something in the syntax rules it out (cf. Karttunen, 1977, p. 25). I do not think that it is the former; the predicted questions *can* be expressed indirectly, by asking a series of questions, or through disjunction or conjunction.

- (735) a. “What ice creams do you like? What ice creams do you not like?”
 b. “What ice creams do you and/or don’t you like?”
 c. “Which Clintons have been senators? Which Clintons haven’t been senators?”
 d. “Which Clintons have and/or haven’t been senators?”

“Disjunctive bipolar complex questions” like these are somewhat awkward things to ask in conversation, but they do occur. We can find them as article titles and online forum questions, for example, when authors are asking for, or intending to give, lists of positive and negative answers to a question.²⁶

- (736) a. “What does or doesn’t cause acne?” (SymptomFind.com, Nov. 29, 2011)
 b. “Just what does or doesn’t happen in a lawyer’s free consultation?” (MichiganLatinoLawyer.com, Jan. 13, 2014)
 c. “Who does or doesn’t do music and who should?” (KTN Kenya, Apr. 6, 2014)
 d. “What does or doesn’t happen if [e-cigarette nicotine] juice freezes?” (E-Cigarette Forum, Nov. 11, 2013)
 e. “How does or doesn’t the physics of [fantasy novel series] Mistborn mesh with Newtonian physics?” (SciFi.StackExchange.com, Jan. 27, 2013)

²⁶These also occur with “and”, but most search results for this structure used in a question – that is, with a question mark – seem to use “or”.

- (i) a. “Barefoot running? Who does and doesn’t?” (therunningbug.co.uk, Jun. 4, 2013)
 b. “What does and what doesn’t work this season [when playing the computer game Starcraft]?” (eu.battle.net, Aug. 12, 2014)
 c. “How does and doesn’t gaining a lot of money change you?” (Quora.com, Oct. 17, 2013)

It should be noted that this is probably a non-Boolean “and” – the speaker is not asking for a list of people that both run and do not run – and could accordingly use the same semantics I assume for “or”.

These questions would be straightforward to model using the semantics of questions presented in Chapter 5: since both WH elements and disjunctions are “O-variables” and can be bound by SAY, there is nothing that would prevent the generation of $\{\lambda w.x \text{ causes acne in } w = t \mid x \in D_e, t \in D_t\}$ from the indexation in (737).²⁷

(737) SAY^{1,2}(what₁ does or₂ doesn’t cause acne)

But this again raises a question: why, if SAY can also bind the bipolar alternative generator (the YN from §5.4 and §8.6.2), can we not bind both in (738)?

(738) a. SAY^{1,2}(YN₁ you like which₂ flavors) (=733c)
 b. SAY^{1,2}(YN₁ ?əng^w₂ =ida dulowε?) (=734)

While it is possible that some semantic constraint, that arises out of the peculiarities of bipolar expression, might prevent this kind of co-indexation, I do not know what it might be; it seems that if binding WH-type variables is possible, and binding bipolar variables is possible, and binding multiple variables simultaneously is possible, then it should at least be possible to bind both WH- and YN-type variables simultaneously.

In any case, the analysis below does not rely on it being possible to *express* complex bipolar questions, just that they might be discourse-relevant semantic objects, whether those objects correspond to single utterances or multiple utterances. In this model, since focus is sensitive to the *union* of discourse relevant alternative sets, the complex bipolar questions can be made up of multiple utterances, just as the complex bipolar question that will be invoked in §8.7.2 is the union of several discourse-relevant alternative sets.

8.7.2 =?m in additive sentences

As noted in §7.2, the enclitic =?m occurs in every additive sentence, raising the question of what, exactly, it does in these sentences.

We could just say that it, too, expresses additivity – that is, that there happens to be a homophony between =?m particles, such that one expresses polarity contrast and another expresses additive focus. To some extent, we may have to simply accept some degree of homophony for =?m, given some complications that arise with respect to usage conventionalization (§8.5). Nonetheless, I think it is revealing to pursue a basically “bipolar” account of additive focus as well: that =?m expresses a discourse-relevant polarity contrast in *all* its uses, including additive uses.

²⁷I should reiterate here that my notation for disjunction “binding” (§5.2.2.1) coindexes the “or” itself, and this does not mean that I am binding alternatives to “or”; the alternatives are still just “does” and “doesn’t”.

The treatment of additive focus involving a *verum* component goes back to a particular thread of investigation on Germanic additive focus. Various authors (including Reis and Rosengren, 1997; Krifka, 1998; Rullmann, 2003; Féry, 2008b) have proposed that in at least some additive sentences in English, German, and Dutch, the additive operator is actually associating with a contrastive topic, and furthermore that the intonation of the sentence has properties we would otherwise associate with *verum* focus, in which an element that is not itself focused receives the focus accent.

(739) PÉTER hat die Ausstellung ÀUCH besucht.

Peter has the exhibition also visited

“Peter visited the exhibition, too.”

(Krifka, 1998, p. 13)

So in (739), the associate of “auch” (also) is not the element with the focus accent – the accented element is “auch” itself – but the element with the “contrastive topic” (§5.5) accent, “Peter”. This would be unusual from the point of view in which “association with focus” means “association with the element bearing a focus accent”; in that case “auch” would not be a focus-sensitive operator at all, but a topic-sensitive operator.

There are several ways that we might account for what is going on in such sentences. Reis and Rosengren (1997) and Féry (2008b) offer phonological explanations: basically, that the *verum*-like intonation of additive sentences comes down to an accident of the accent-assigning algorithm. *Verum* and additive answers are both sentences in which there is a lack of non-given, non-topical material, and so in both the accent-assigning algorithm is forced to accent material that is not, itself, *F*-marked. Krifka (1998) and Rullmann (2003), on the other hand, offer semantic explanations in which it is not just a coincidence, and additive focus does have (some kind of) *verum* component.²⁸

As a language that marks *verum* focus morphologically, rather than intonationally, Kwak’wala data gives us a straightforward way to decide between these hypotheses. The appearance of $=\text{?}m$ in both *verum* and additive answers cannot just be a coincidence of the accent-assigning algorithm. Even if, in the end, we were to decide that $=\text{?}m$ is not fundamentally a *verum* marker, its co-occurrence in both *verum* and additive sentences suggests that some aspect of their semantics or pragmatics is shared.

²⁸Nor is this the only such “coincidental” connection between additive and *verum* focus; Rullmann (2003) notes a number of examples in which Germanic discourse particles have both additive and *verum* uses. For example, we can note that there is a “too” in English that has a purely *verum* use; the sentence in (740b) does not make any presupposition that someone else also took out the garbage.

- (740) a. “Dylan didn’t take out the garbage!”
 b. “I did too!”

The account below is very close to that of Rullmann (2003), which is based on Krifka (1998). For Rullmann, additive answers display contrastive-topic and *verum* intonations because they address complex implicit questions like “And what about Peter? Did he visit the exhibition or not?” that arises from the utterance of (741b).

- (741) a. “Who visited the exhibition?”
 b. “Alice visited the exhibition. ”
 c. “CHRÍS visited the exhibition, TÒO.”

That is, although the answer in (741c) might seem to answer a question of the form $\{\lambda w.that\ x\ visited\ the\ exhibition\ in\ w\ | x \in D_e\}$ like that represented in (742), it actually answers a complex question, something roughly of the form $\{\lambda w.that\ x\ visited\ the\ exhibition\ in\ w = y\ | y \in D_t, x \in D_e\}$ like that represented in (743).²⁹

- (742) $\left\{ \begin{array}{l} \text{Alice visited the exhibition} \\ \text{Chris visited the exhibition} \end{array} \right\}$

- (743) $\left\{ \begin{array}{l} \text{Alice did visit the exhibition} \\ \text{Alice didn't visit the exhibition} \\ \text{Chris did visit the exhibition} \\ \text{Chris didn't visit the exhibition} \end{array} \right\}$

Where does this question come from? Is it an implicit question in the discourse, like the complex bipolar questions hypothesized in §8.7.1? I will suggest below that it need not be present in the discourse as a complex bipolar question. Rather, additives respond to several discourse-relevant considerations, and these considerations, considered as a union, have a complex bipolar form.

Krifka (1998) argues that answers come with a manner implicature (the “distinctiveness” condition) that they constitute complete answers to the question under discussion, and thus that alternative answers are untrue or are unknown. So in the dialogue in (744), the utterance in (744b) implicates that Chris did not visit the exhibition, or that the speaker does not know which of {that Chris visited the exhibition, that Chris did not visit the exhibition} is true.³⁰

²⁹Rullmann (2003) uses Büring’s (2003) “nested” semantics of complex questions (in this case, something like $\{\{P, \neg P\}, \{Q, \neg Q\}, \dots\}$), but as I noted in §5.5 and §8.7.1.4, I adopt a flat structure (in this case, $\{P, \neg P, Q, \neg Q\}$).

³⁰It also might implicate other things – that Alice did not visit the park, etc. – according to what other questions the interlocutors think might be relevant, but it certainly would implicate that Chris did not (or was not known to) visit the exhibition.

Note that this is not a model in which any speaker necessarily knows what questions are under discussion; all participants are trying to *narrow down* the nature of the current discussion. It is entirely possible, here, that a

- (744) a. “Who visited the exhibition?”
 b. “Alice visited the exhibition.”

Since implicated propositions can contribute to C just as any discourse-relevant consideration can (§5.3.1), the C after the exchange in (744) would be that in (745).

$$(745) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that \text{ Alice visited the exhibition in } w \\ \lambda w.that \text{ Bernie visited the exhibition in } w \\ \lambda w.that \text{ Chris visited the exhibition in } w \\ \dots \end{array} \right\} \right\}$$

$$\left\{ \begin{array}{l} \left\{ \lambda w.that \text{ Alice visited the exhibition in } w \right\} \\ \left\{ \lambda w.that \text{ Chris did not visit the exhibition in } w \right\} \end{array} \right\}$$

This is exactly the right form to predict both a constituent focus, ranging over {Alice, Bernie, Chris}, and a *verum*-type focus, ranging over $\{\lambda p.p, \lambda p.\neg p\}$; the most restrictive set that contains all of the alternatives in $\bigcup C$ is $\{\lambda w.that x \text{ visited the exhibition in } w = t \mid t \in D_t, x \in D_e\}$.

In other words, additive sentences are also *verum* sentences, because they involve polarity contrast with a distinctiveness implicature.

Two additional things should be noted. First, we can see that the inclusion of the question (744a) in C is not necessary for the calculation to work – (744b) and the distinctiveness implicature are sufficient – although we need not exclude it, either.

Secondly, the implicature need not result in a single proposition. As noted, an answer like (744b) does not necessarily implicate that Peter did *not* visit the exhibition, just that the speaker does not know whether or not he did. If what is raised is really an implicated question $\{\lambda w.that \text{ Chris visited the exhibition in } w, \lambda w.that \text{ Chris did not visit the exhibition in } w\}$ as in Rullmann (2003), rather than the quasi-assertive implicature $\{\lambda w.that \text{ Chris did not visit the exhibition in } w\}$, the resulting overall question $\bigcup C$ remains the same.

$$(746) \quad C = \left\{ \left\{ \begin{array}{l} \lambda w.that \text{ Alice visited the exhibition in } w \\ \lambda w.that \text{ Bernie visited the exhibition in } w \\ \lambda w.that \text{ Chris visited the exhibition in } w \\ \dots \end{array} \right\} \right\}$$

$$\left\{ \begin{array}{l} \left\{ \lambda w.that \text{ Alice visited the exhibition in } w \right\} \\ \left\{ \lambda w.that \text{ Chris visited the exhibition in } w \right\} \\ \left\{ \lambda w.that \text{ Chris did not visit the exhibition in } w \right\} \end{array} \right\}$$

speaker act as if a distinctiveness implicature has been generated by a question that has not explicitly been asked. One set of distinctiveness implicatures is nearly certain – the ones relative to the explicit question – but more sets are at least possible.

So in either case – whether the implicature is the negation or itself a bipolar question – C is bipolar, and therefore additive sentences require a bipolar F-closure to be congruent with C , which would explain the appearance of $=?m$ in additive sentences.

8.7.3 $=?m$ in exclusive sentences

What polarity contrast is relevant to exclusive sentences?

I think the answer lies in this: that when a speaker answers a question with “Only X did Y ”, they are generally held to be expressing two things: that X did Y , and that the alternatives to X did not do Y .³¹ This is what an answerer does in the complex bipolar answers discussed in §8.7.1, like (720b) and (721b): propose that it is necessary to the conversation to divide the inquiry into positive and negative subquestions and answer both.

If we were to explicitly state both meanings of an English “only” sentences, we would see the same kind of constituent/polarity pair-list intonation as we did in (721b).

- (747) a. “Who graduated?”
 b. “Only Adam graduated.”
 c. = “JÓHN DÌDN’T graduate, but ÁDAM DÌD graduate.”

This intonation suggests the relevance of a complex bipolar question. This is not necessarily to say that (747b) and (747c) have the exact same semantics, just that the intonation of (747c) can be used to reveal the implicit question that the answerer is assuming: one of the form $\{\lambda w.x$ graduated in $w = t \mid x \in D_e, t \in D_t\}$.

While this may appear to be a strange question for (747b) to be congruent to, note that it represents the union of the alternative sets corresponding to the questions “Who graduated?” and “Who didn’t graduate?” Put another way, we could say that exclusive sentences are congruent to two questions: the two WH questions corresponding to their positive and negative meaning components. (Since the model in Chapter 5 treats focus as sensitive to the union of discourse-relevant considerations, it does not matter here whether we say that exclusive sentences are congruent to one complex question or two simple questions; both would have the same effect.)

8.7.3.1 The congruence of exclusives

This would also explain an interesting property of “only” answers: that they suffice as answers to both WH and yes/no questions:

³¹As noted in §7.3.7, what exactly these meanings are is a matter of long-standing debate, but almost all accounts of exclusives at least agree that exclusive sentences have positive and negative meaning components.

- (748) a. “Did the boys graduate?” “Only Adam graduated.”
 b. “Who graduated?” “Only Adam graduated.”

This is also a property of other complex bipolar answers like in (720), (721), and (749).

- (749) a. “Did the boys graduate?” “JÓHN DÌDN’T graduate, but ÁDAM DÌD graduate.”
 b. “Who graduated?” “JÓHN DÌDN’T graduate, but ÁDAM DÌD graduate.”

This is even more striking in Kwak’wala, since WH and yes/no questions do not otherwise “share” answer types; aside from some exceptions like those in §8.5, there is otherwise a clear partition between sentences as to whether they answer WH or yes/no questions. Exclusive sentences are the only sentence type I have encountered that systematically can answer both kinds of questions.

- (750) a. wíłax^wdaǰ^wmás dulo?
 wíła=xdaǰ^w=?m=a=s dulo
 all=PL=VER=QUES=2 win
 “Did you all win?”

- b. **higam**ⁱ Ruby dulo
higa=?m=i Ruby dulo
only=VER=3DIST Ruby win
 “**Only** Ruby won.”

- (751) a. ?əng^wida dulowε?
 ?ng^w=i=da dulow=a=a?
 who=3DIST=DET win=a=INVIS
 “Who won?”

- b. **higam**ⁱ Ruby dulo
higa=?m=i Ruby dulo
only=VER=3DIST Ruby win
 “**Only** Ruby won.”

The complex bipolar account above would explain why this is: exclusive answers can be (indirectly) congruent to both types of questions because they are directly congruent to a complex bipolar question: either the bipolar elaboration of the WH question or the WH elaboration of the bipolar question.

If exclusive answers did *not* have complex polar focus semantic values – that is, if they did

not have both constituent-type and polarity contrasts – then we would expect at least one of the question/answer pairs to be incongruent, since the question would invoke a contrast that the answer would lack.

Put more formally, if an exclusive answer only had an F-closure along the lines of $\{\lambda w.that\ x\ won\ in\ w\ | x \in D_e\}$, then it would meta-presuppose that every discourse-relevant consideration in C would be of that form. This would predict congruence in the case of (751), but would predict *incongruence* in the case of (750), since the question would be of the form $\{\lambda w.that\ Ruby\ won\ in\ w = t\ | t \in D_t\}$ instead.

On the other hand, if an exclusive answer only had an F-closure along the lines of $\{\lambda w.that\ Ruby\ won\ in\ w = t\ | t \in D_t\}$, then it would likewise meta-presuppose that every discourse-relevant consideration in C would be of this form. This would predict congruence in the case of (750) but predict incongruence in the case of (751).

However, if an exclusive answer has an F-closure along the lines of $\{\lambda w.x\ won\ in\ w = t\ | x \in D_e, t \in D_t\}$, then both (750) and (751) would be congruent.

This more complex question rather neatly resolves the formal problem considered in §7.5.4.3. The congruence presupposition of an exclusive sentence cannot, given my implementation of focus semantics and focus operator association, be the same as the congruence presupposition of its prejacent. Rather, I have to predict (along with Roberts, 2012) that exclusive sentences have a more complex F-closure than their prejacent, and therefore that they directly answer a more complex implicit question. This prediction is confirmed by evidence from Kwak’wala: we can only explain the form and usage of exclusive sentences like *higami Ruby dulo* (“Only Ruby won”) if they have a more complex F-closure than their prejacent, specifically, a complex bipolar F-closure.

8.8 =?m with la

The combination of *la* (“now”, “then”, “at that time”) and =?m is extremely common, both in speech and texts, but I do not think it always has the same semantic or pragmatic contribution.

The most frequent use of *la?m*, in narrative and I think in conversation as well, is as a sentence-level conjunction (roughly “and then...”) tying together sentences in a narrative (Boas and Hunt, 1905; Berman, 1982).

- (752) a. ẉigilase ǰ̣^wa ṇala
 ẉi-gi-l=as=e ǰ̣^wa ṇala
 what-do-ONGOING=2=QUES ACC.3MED day
 “‘What did you do today?’”

- b. galabeyən ğəʔastala
galabe=n ğʔ-haʃsta-la
first=1 early-want?-ONGOING
“First, I ate breakfast.”
- c. ləʔəmxdən la laʃa qaquʃəʔas
l=ʔm=xd=n la l=(a)ʃa qa-qəʃ-ha-was
then=hiVER=REC.PAST=1 now PREP=ACC REDUP-know-try-PLACE
“Then I went to school.”

These sentences tend to be used in scene continuations, where the sentence continues the thread of narrative from the previous sentence, rather than when a sentence executes a scene change or is not narrative.

What is =ʔm doing in these *la* sentences? For the “narrative conjunction” sentences, I think it is reasonable to categorize such sentences as additive, since their usage suggests that they presuppose another, prior event having been expressed. This is true even in English; to begin a sentence with “And then...” requires the prior expression of some sort of prior event.³²

However, if =ʔm always express a polarity contrast, what polarity contrast is it expressing? While, as noted, I do not think we can necessarily pin down exactly what contrast a speaker addresses in each kind of =ʔm use, I think the “distinctiveness” account of the additive in §8.7.2 at least provides a candidate contrast. If Krifka’s distinctiveness condition applies not just to immediate and overt questions, but also to “higher” and implicit QUDs – which we have no reason to believe it would not – then its application to the universal implicit question of narratives (something like “What happened?”) would, I think, predict the right sort of distinctiveness implicatures to impart a polarity contrast. Specifically, each sentence, taken as expressing the completion of the answer “What happened?”, implicates that that is all that happened – that is, that for any further event *e*, *e* did not happen. An assertion of any such *e* both answers “What happened?” and denies the denial of *e*. This requires a complex bipolar alternative set to address.

It could potentially, however, be a contrastive or exclusive rather than an additive usage of =ʔm; possibly something like “at that time, but not at other times”, “just now, but not earlier”.

³²I do not think this is *just* a sentential conjunction with a prior sentence, in a syntax-beyond-the-sentence. It is not as though any prior sentence, regardless of its meaning, will allow the continuation “And then...”, and the presupposition of “And then...” can be satisfied non-locally in any case.

(753) *Context: A number of mattresses had been left out in the rain; they had been damp, but were now dry.*

ləm^hu^h ləm^hx^wʔida
 l=ʔm=u^h lm^{x^w}-xʔid=a
 now=VER=3_{MED} dry?-CHANGE=A
 “They’re dry now.”

(754) *Context: I have been attempting to play a memory game with my eyes closed, in which a speaker calls out a card and I attempt to find that card. I had not gotten a single correct match, until finally I happen across a correct card.*

ləʔəm nəqa
 l=ʔm nqa
 now=VER correct
 “Now it’s correct!”

These *could* be answers to covert questions, along the lines of “Are they dry yet?”/“Yes, they’re dry now”, but not all such sentences could be *verum* answers.

(755) *Context: The speaker’s father used to bring newspapers to the elders and read the news to them. One day he went around to them exclaiming...*

ləʔəm loʔi Hitla^h Poland
 l=ʔm la-w-ʔ=i Hitla=^h Poland
 then=VER go-out-obtain=3_{DIST} Hitler=_{ACC} Poland
 “Hitler’s got Poland!”

This cannot be a *verum* usage, because part of the background to this story is that the elders did not know about either Hitler or Poland, and thus would not (and could not) have asked anything like “Does Hitler have Poland yet?” Rather, this would seem to be something along the lines of “It is just now, rather than in the past, that Hitler got Poland.”

Another usage of *ləʔəm* is to express what we express in English with “already” (756).

- (756) a. $l\acute{o}ʔ\acute{e}m\acute{x}d\acute{e}n$ $h\acute{e}m\acute{x}\acute{\gamma}ida$
 $l=\acute{\gamma}m=x\acute{d}=n$ $hm-x\acute{\gamma}ida$
 now=VER=REC.PAST=1 eat-CHANGE
 “I have eaten already.”
- b. $l\acute{o}ʔ\acute{e}m\acute{x}d\acute{e}n$ $p\acute{e}t\acute{i}da$
 $l=\acute{\gamma}m=x\acute{d}=n$ $pt-x\acute{\gamma}ida$
 now=VER=REC.PAST=1 medicine-CHANGE
 “I already took my medicine.”

The sentences in (756), despite containing $l\acute{o}ʔ\acute{e}m$, do not have any obvious additive-like or exclusive-like contextual restrictions. It seems more likely to me that these are just *verum* answers, to questions of the form “Have you now done [something]?”

Note that when a sentence with *la* (in the sense of “now”) is not additive, not affirmative, and not involving a temporal polarity contrast like in (753) or (755), *la* simply occurs on its own, as in (757).

- (757) a. $\acute{\gamma}\acute{e}ʔ\acute{e}ka\acute{q}ila$ la
 $\acute{\gamma}-\acute{\gamma}ik-\acute{a}q\acute{i}-la$ la
 REDUP-good-??-ONGOING now
 “Take care now!” (common parting phrase)
- b. $l\acute{o}ʔas$ $g\acute{o}ns\acute{o}n\acute{x}ila$
 $la=a=s$ $gns-\acute{\gamma}n\acute{x}ila$
 now=QUES=2 how.many-year
 “How old are you now?”

That is, it is not just the semantics of this sense (“now”, “then”, “at this time”) of *la* that condition the use of $=\acute{\gamma}m$. Rather, $=\acute{\gamma}m$ appears to occur with *la* for various contextual reasons – affirmation, additivity, and contrast among them – unlike other conventional uses of $=\acute{\gamma}m$ in which the co-occurrence of $=\acute{\gamma}m$ and a class of elements (negation, numerals) has a fixed usage that blocks the occurrence of $=\acute{\gamma}m$ when other usages (§8.5).

8.9 $=\acute{\gamma}m$ in equative sentences

$=\acute{\gamma}m$ is extremely common in equative sentences and clefts, but it has proven very hard to pin down what, if anything, it means, and therefore hard to square the uses of $=\acute{\gamma}m$ in equative sentences with the bipolar account of $=\acute{\gamma}m$ pursued in this chapter. Some uses of $=\acute{\gamma}m$ in equative

sentences are just ordinary *verum* and additive uses as seen above, but many do not appear to be. As noted in §4.2.7, copular sentences tend to have an element that follows the copula; this is often =*d(a)* (probably related, at least historically, to the determiner =*da*, as considered in §4.2.9), but in equative sentences and clefts =*ʔm* is often used instead.³³

It would be plausible to assume that equative sentences and clefts are in some sense a category of exhaustive sentences, since what they do is single out a unique individual. I have never found a context in which a speaker felt that one of =*d(a)* or =*ʔm* is appropriate and the other inappropriate; when both can occur, they seem to be interchangeable. I have asked speakers if they sense any difference in meaning, or can think of any difference in use, between these, but they cannot pin down a difference either.

- (758) a. hedi Ruby dulowa
 he=d=i Ruby dulowa
 be.3DIST=DET=3DIST Ruby win
 ‘‘It’s Ruby who won.’’
- b. hemi Ruby dulowa
 he=ʔm=i Ruby dulowa
 be.3DIST=VER=3DIST Ruby win
 ‘‘It’s Ruby who won.’’

I should note that, while speakers do report that sentences like (758) ‘‘sound like there’s only one’’ (§4.3.4), this meaning is readily cancelled regardless of whether =*d(a)* (759a) or =*ʔm* (759b) is used, unlike the exclusive entailment of *hig-* (759c).

³³It is not simply that equative sentences are copular; locative, measure, and indefinite-predicate copular sentences (§4.4.1, §4.4.5, §4.4.4) do not receive =*ʔm* except for one of the reasons above (e.g., that they are polar questions, or affirmative answers). For example, in (i.a), I had constructed a sentence meant to be an ordinary assertion, but the speaker felt that it sounded like a question instead; a second attempt with =*d(a)* instead was accepted as an assertion (i.b).

- (i) a. ʔhemi leʔ Hannaheʔe Boston
 he=ʔm=i l=a=i Hannah=a=i Boston
 be.3DIST=VER=3DIST PREP=EMBED=3DIST Hannah=EMBED=3DIST Boston
 Intended: ‘‘Hannah is in Boston.’’
 Speaker comment: ‘‘Is that supposed to be a question?’’
- b. ✓ hedi leʔ Hannaheʔe Boston
 he=d=i l=a=i Hannah=a=i Boston
 be.3DIST=DET=3DIST PREP=EMBED=3DIST Hannah=EMBED=3DIST Boston
 ‘‘Hannah is in Boston.’’

As a side note, *Boston* and *Bostonas* (‘‘Boston-place’’) usually refer to the U.S.A. as a whole, but in this case we were talking about Boston, Massachusetts.

- (759) a. ✓ hedi Ruby dulowa, dulowa?əmǰe?e Pat
 he=d=i Ruby dulowa, dulowa=?m=ǰa=i Pat
 be.3DIST=DET=3DIST Ruby win, win=VER=ADD.FOC=3DIST Pat
 “It’s Ruby who won, and Pat also won.”
- b. ✓ hēmi Ruby dulowa, dulowa?əmǰe?e Pat
 he=?m=i Ruby dulowa, dulowa=??m=ǰa=i Pat
 be.3DIST=VER=3DIST Ruby win, win=VER=ADD.FOC=3DIST Pat
 “It’s Ruby who won, and Pat also won.”
- c. ✗ higami Ruby dulowa, dulowa?əmǰe?e Pat
 higa=?m=i Ruby dulowa, dulowa=?m=ǰa=i Pat
 only=VER=3DIST Ruby win, win=VER=ADD.FOC=3DIST Pat
 “Only Ruby won, and Pat also won.”
 Speaker comment: “No, *higa Ruby* means she’s the only winner.”

Despite this apparent interchangeability, there are a few tendencies we can observe. For example, when a cleft is used to correct someone rather than answer a question – “it wasn’t *X* that did something, it was *Y*” – $=d(a)$ tends to be used. Also, when a copula (aside from *hig-*) scopes under negation, $=?m$ does not occur, while $=d(a)$ can. Finally, $=d(a)$ is rarely used with first and second persons; in positive contexts $=?m$ tends to be used, and in negative contexts this slot is generally empty. In other words, $=d(a)$ and $=?m$ each have their idiosyncratic distributions, but in many cases they can both occur, and when they can, they do not seem to induce any obvious difference in meaning.

My hunch is that, when both $=d(a)$ and $=?m$ are appropriate, the choice between them might depend on expectations regarding identity. In both types of sentences, we can describe the meaning as “exhaustive” or “identificational” in some way, but my sense is that $=d(a)$ tends to be used where it is expected that there only be one person/thing (or only be *N* people/things) of which the stated state/action is true, whereas $=?m$ tends to be used when there might have been an expectation of more. That is, $=?m$ marks something like a less-than-expected answer, in the sense of Beaver and Clark (2008), while $=d(a)$ is used for as-much-as-expected answers.³⁴

8.10 Summary

$=?m$ occurs in a wide variety of contexts that do not form an obvious natural class. It has been

³⁴On the other hand, when only one of $=d(a)$ and $=?m$ are appropriate, I do not think that this fine distinction is made. For example, in first and second person equative sentences, $=?m$ seems to be used regardless of expectation.

clear since at least Boas (1900) that it has *something* to do with discourse – even if it is just “discourse” in the speaker’s mind. However, just saying that it has a “close connection” to an old subject leaves the unusual distribution of $=\lambda m$ unexplained. I propose that each of these contexts involves a discourse-relevant polarity contrast.

Taking $=\lambda m$ to be indicative of a polarity contrast, whether we implement it as the generator of alternatives (§8.6.1.3) or an operator that is sensitive to bipolar alternatives (§8.6.1.4), captures fairly straightforwardly:

- the presence of $=\lambda m$ in affirmative answers, contrast, and agreement.
- the absence of $=\lambda m$ in answers to WH questions.
- the presence of $=\lambda m$ in most yes/no questions.
- the absence of $=\lambda m$ in monopolar or alternative questions.

Two additional uses of $=\lambda m$ are captured when we consider contexts with both bipolar and constituent alternatives, what I call “complex bipolar” alternative sets in §8.7.1:

- the presence of $=\lambda m$ in additive sentences.
- the presence of $=\lambda m$ in exclusive sentences.

This account does not itself account for:

- the absence of $=\lambda m$ in negative answers.
- the absence of $=\lambda m$ in negative questions.

I do not, however, think that this necessarily indicates that $=\lambda m$ is polarity-sensitive, but is due to a conventionalized association of negative $=\lambda m$ sentences with a “not yet” reading.

There are two notable contexts in which $=\lambda m$ is very frequent, and where I think $=\lambda m$ may have various potential meanings, but for which I am uncertain which type of $=\lambda m$ meaning best explains this frequency:

- the high frequency of $=\lambda m$ in *la-* (“now, then, at this time”) sentences.
- the high frequency of $=\lambda m$ in equative sentences.

I think most instances of $=?m$ in *la-* sentences are best explainable as additive, and most instances of $=?m$ in equative sentences are exclusive, but it may be that these have other meanings or are not themselves particularly meaningful at all.

The distribution of $=?m$ invites comparisons with the conventional expression of *verum* focus in English, the stressed auxiliary construction. While both constructions conventionally express *verum* focus, they have rather different distributions outside of affirmative answers, arguing against the idea of a universal function VERUM corresponding to the English stressed auxiliary and expressing a uniform semantic function (e.g., the certainty semantics of Romero and Han, 2004) whenever it occurs.³⁵

Given that *verum* in English (and its relatives) is expressed rather indirectly (by a sentential accent on another word in the sentence), we might instead conclude the opposite: that Kwak’wala $=?m$ expresses the “true” VERUM function and the English stressed auxiliary construction is a coincidence of other factors (e.g., the *dictum* focus of Creswell, 2000).

I do not go so far as to argue this, however, as it would be rather unlike my treatment of focus overall. In §1.7, I treat focus as a semantic phenomenon – roughly, the ability of certain elements of a sentence to be treated as variable for some interpretive purposes and have a default value for others – whose presence can be deduced by various means. Every focus-sensitive expressive phenomenon (be that accentuation, clefting, special morphology, variation in operators, etc.) narrows down the possibilities for focus interpretation, but by different means. Likewise, the various apparent expressions of *verum* all allow the listener to deduce that a polar element in the sentence should be considered variable for some interpretive purposes, but not necessarily by the same deductive route.

Nonetheless, I would claim Kwak’wala $=?m$ more directly marks polarity contrasts, and in a wider variety of contexts, revealing the presence and absence of polarity contrasts more finely than the English stressed auxiliary would. In doing so, it provides support for various hypotheses regarding the interaction of polarity, questions, and focus. It provides morphological confirmation that polar questions can correspond to either monopolar $\{P\}$ or bipolar $\{P, \neg P\}$ alternative sets (Krifka, 2013), and suggests a richer semantics for constituent/polarity questions (that is, complex bipolar questions) than Roberts (2012) or Büring (2003) utilize. Finally, it provides a morphological confirmation of the hypothesis that additive answers also express a polarity contrast (Krifka, 1998; Rullmann, 2003).

³⁵We can see a parallel in the history of focus investigation (Büring, 2007; Krifka, 2007): theories that associate focus expressions with a particular, stable interpretation have largely given way to theories where focus expresses the properties of semantic or pragmatic objects (like alternative sets) that are utilized by meaningful elements.

Chapter 9

Conclusion

9.1 Theoretical conclusions

9.1.1 Information structure in a cooperative game

Many authors in linguistics and the philosophy of language (e.g. Lewis, 1979; Stalnaker, 1978; Carlson, 1984; Grice, 1989; Roberts, 2012) have treated dialogue as a cooperative, game-like enterprise, in which two or more players accomplish a common goal (like information exchange) by making “moves” that they believe will change the game state in the direction of that common goal.

This cooperative game metaphor is doubly apt, in that if you have ever watched a cooperative game being played there is usually (if it is not forbidden in the rules) a great deal of “table talk” in which the participants:

- clarify what the players’ current common goals and knowledge of the game state are,
- inform the other players of how the current move is intended to address these goals, and
- suggest to other players what kinds of moves would be appropriate in the future.

Sometimes this table talk is informative, in that a player lets the other players know that the current move addresses an intermediate goal that has not been made overt, or that cannot have been deduced from the game state. Sometimes this table talk is uninformative, and recapitulates information that all players know, so that players can reassure themselves that they are all on the same page with respect to their current goals and strategy.

Players of the “conversation game” do this as well; in (presumably) all languages there are some aspects of the linguistic signal (intonation, word order, eyebrow height, etc.) that players

utilize to achieve the above tasks: “common ground management” tasks in the sense of Krifka (2007).¹

The formal model in Chapter 5 attempts to model common ground management tasks – the “table talk” – as a process parallel to common ground content tasks – the “game”. In common ground content tasks, there are contextual variables such as w , the index variable of the current world, and no party knows exactly which possible world w refers to. Interlocutors can, however, make claims about w – asserting that w is a certain way, presupposing that w is a certain way, etc. – and by this cooperatively narrow down the set of referential possibilities for w .

Common ground management tasks proceed, in this model, in the same way. A contextual variable C is the index variable into a set of possible *conversations*, where a conversation is a set of explicit and implicit considerations (questions, statements, etc.) relevant to speakers’ communicative goals. Given that considerations can be (and often are) implicit, the interlocutors do not necessarily know which among the possible conversations C refers to. However, just as interlocutors can make claims about w , they can make claims about C – asserting that C is a certain way, presupposing that C is a certain way, etc. – and by this cooperatively narrow down the referential possibilities for C .²

In this model, speech acts contribute both assertions and presuppositions about C . Speech-act operators³ bind variables within the sentence that determine the content of these assertions and presuppositions. The WH-variables (or more broadly, a class of non-focus variables I call “O-variables”) bound by the operator determine the nature of the operator’s assertion regarding C , whereas the focus variables bound by the operator determine the nature of the operator’s presupposition regarding C .

The model sketched in Chapter 5 is in some ways a toy model, and does not attempt to model many crucial aspects of English focus of long interest to semanticists and syntacticians. It is meant, however, to capture a few aspects that I think are crucial to the consideration and

¹This is potentially a broader set of tasks than those that deal with “information structure” more narrowly speaking; information structure is an aspect of common ground management but not necessarily all of it. In some senses of “focus”, for example, the questioning distinctions explored in §8.4 and §8.6.2 would probably not count as “focus”. However, it is interesting to note that, in both English and Kwak’wala, the same aspects of the linguistic signal used for focus (intonation and $=?m$, respectively) are used to achieve this other common ground management task as well.

²It is important to acknowledge that C , and whatever other “common ground management” variables we might need, do not constitute a separate “common ground” from w and other conventionally-assumed contextual variables. As Krifka (2007, p. 17) notes, “any ecologically valid notion of CG [the common ground] must also contain information about the manifest communicative interests and goals of the participants.” The information that C represents is itself a part of w – facts about what people say and want and intend are facts about the world, too – and we can discuss these by ordinary means as well (“We’re not talking about X , we’re talking about Y !”). It is just that there is also appears to be a special set of communicative phenomena that make claims about this particular “dimension” of w , and it is convenient to represent this content as a special variable C .

³The system defines only one speech-act operator, SAY, but this is a simplification made possible only by the fact that this model only is intended to account for a narrow range of pragmatic phenomena.

investigation of Kwak’wala focus:

- It treats focus in response to questions, and focus in response to statements, and focus in response to a potentially-mixed *set* of questions and statements in a uniform manner. This is useful for practical reasons, because I make so much use of statement-to-statement contrast to explore Kwak’wala focus, and requiring every such contrast to involve an implicit accommodation of a question would mean positing an unobservable state each time. It is also useful for theoretical reasons, since I adapt an account of additive focus (Krifka, 1998; Rullmann, 2003) that treats additive responses as responses to multiple considerations.
- It represents both constituent-type and polarity contrasts, and “hybrid” contrasts with both of these contrast types. Accounting for Kwak’wala focus requires clarity about polarity contrasts, and some focus models do not treat polarity contrast as distinct from non-contrast (e.g. Roberts, 2012; Büring, 2003) or are not explicit about how polarity contrasts are modeled.
- It calculates the meaning of sentences with overt focus operators while also allowing the discourse congruence of these sentences to be calculated; it does so in the manner of Roberts (2012), by making the congruence calculation constrain the calculation of the operator.

Many existing models of focus could handle one or more of these aspects, but no single model was explicit about all of them, so I put forward a synthesis that suffices to handle the three aspects above. I adopt a Roberts-like (2012) model in which the congruence of an utterance is calculated with respect to a QUD-like variable, but this QUD variable (*C*) consists of a set of semantic objects that are neutral between whether they represent questions or statements (cf. Groenendijk and Roelofsen, 2009). Unlike Roberts, Groenendijk, and Roelofsen, however, I utilize Rooth-Hamblin (Hamblin, 1973; Rooth, 1985) alternative sets, since these treat polarity contrasts as distinct from non-contrast, utilizing the compositional focus semantics of Kratzer (1991) and Wold (1996). Finally, I adopt a Krifka-style (2006) hybrid model of association, in which focus operators have a syntactic association with a larger constituent (the FP) than the focus itself, and the focus itself serves to determine which alternatives to the FP are quantified over; this latter determination is handled by a Roberts-like (2012) constraint via the *C* variable.

9.1.2 Predication and focus

In general, Kwak’wala’s limited inventory of focus-expressing phenomena proves of benefit when researching the interface between pragmatics and its linguistic expression. In English,

there are a variety of signals that express constituent-type focus (that is, focus in response to a WH question); intonational signals are the most notable, but there are also dedicated constructions like clefts and pseudoclefts, as well as constructions like inverse copular sentences which are associated with limited possible focus interpretations.

In Kwak’wala we can sometimes observe intonational variation that appears to correspond to constituent-type focus (§6.3.1), but this may be metalinguistic, since in elicitation contexts these two are easily conflated (§6.3.3).

There is, however, one clear expression of constituent-type focus, which is that particular types of predicates are associated with limitations on the possible focus interpretations of the sentence (§6.5).⁴ This is not a phenomenon limited to Kwak’wala, but in Kwak’wala we can investigate the relationship between predicate type and focus in relative isolation.

We can express these interpretive limitations as follows. First, consider a speaker’s choice between *allosentences* in the sense of Lambrecht (1994) – possible sentential expressions of the same meaning – where, for example, a Kwak’wala speaker has various possibilities to express that they want water:

$$(760) \quad \textit{that I want water} = \left\{ \begin{array}{l} \textit{ʔəxʔeχsdən} \textit{ ʃa} \textit{ wap} \\ \text{("I want water.")} \\ \textit{wapən} \textit{ ʔəxʔeχsdəsəwεʔ} \\ \text{("What I want is water.")} \\ \textit{nug}^{\textit{a}} \textit{ ʔəm} \textit{ ʔəxʔeχsda} \textit{ ʃa} \textit{ wap} \\ \text{("It is me who wants water.")} \end{array} \right\}$$

Consider also a hierarchy of potential predicates, as given in §6.5.6.

$$(761) \quad \{ \textit{VP, AP, QP} \} > \textit{NP} > \textit{relational DP} > \textit{proper name}$$

If the speaker chooses a sentence with a predicate type lower on this hierarchy – like the NP *wap* (“water”) – over a sentence with a predicate type higher on this hierarchy – like the VP *ʔəxʔeχsd* (“want”) – then the only possible focus interpretation of this sentence is one in which *wap* is the focus.

In §6.5.8, I express this relationship as a dual principle of allosentential choice: “Choose a sentence with a predicate type as high as possible on this hierarchy, or choose a sentence with the focus as predicate”; when the speaker has flouted the first of these principles (that is, chosen a sentence with a predicate of a type lower on the hierarchy, when a sentence with a

⁴This is not to say that this observation is completely straightforward, in that we do not have an abundance of evidence that the “clefted” constituent of a cleft sentence is a predicate. To some extent this is just an assumption, but it is an assumption that allows a unified account of Kwak’wala focus that is also consistent with what we can observe about predication and focus in English copular sentences.

better predicate had been available) then the listener can conclude they are following the latter (chosen the focus as the predicate).

It should be emphasized that it is not just the choice of an NP or DP predicate that conditions this restricted focus interpretation, but the choice of an NP or DP predicate *instead of* a predicate of a higher type. We do not find, for example, a restricted focus interpretation when expressing “Pat is a doctor” with the nominal predicate *dag^wada* (“doctor”); there is not an allosentential alternative in which a better predicate is available; *dag^wada* is a better predicate in the predicative hierarchy than *=uǎ Pat*, and so choosing it does not violate the hierarchy.

$$(762) \quad \textit{that Pat will be a doctor} = \left\{ \begin{array}{l} \textit{dag^wada\lambda u\check{x} Pat} \\ \text{("Pat will be a doctor.")} \\ \textit{yu\lambda u\check{x} Pat dag^wada\lambda} \\ \text{("It is Pat who will be a doctor.")} \end{array} \right\}$$

Thus, it cannot just be something about added structure – say, a covert predicative copula – that an NP or DP predicate might require, that a verbal predicate would not require, that conditions the different focus interpretations.

It is also not the choice of a verbal subject (that is, a headless relative clause), and also not just something about the added covert structure that a headless relative clause subject might require; we can observe this difference in focus interpretation even in sentences with identical, non-verbal subjects. The choice of *subak^wida laq^wa* (“The wood was something-chopped”) in (763), whose predicate is a noun-like participle, constrains focus interpretation, whereas the choice of *supicawida laq^wa* (“The wood was chopped”), whose predicate is a verbal passive, does not constrain focus interpretation. This difference occurs despite them having the same subject (*=ida laq^wa*, “the wood”); the difference must lie in the difference between *subak^w* and *supicu?*

$$(763) \quad \textit{that the wood was chopped} = \left\{ \begin{array}{l} \textit{subak^wida laq^wa} \\ \text{("The wood was something-chopped.")} \\ \textit{supicawida laq^wa} \\ \text{("The wood was chopped.")} \end{array} \right\}$$

It should also be emphasized that this choice is not just between inversions or rearrangements of sentential elements. The choice of *subak^wida laq^wa* over *supicawida laq^wa* constrains the focus possibilities even though the former sentence is not in any sense an inversion or rearrangement of the material in the latter.

This is not to argue that movement (such as copular sentence inversion) is not utilized at all, in other languages or even in Kwak’wala. Rather, it suggests that what matters is the *results*;

whether generated by movement or base-generated, what is important is the comparison of predicate types between possible expressions of the sentence. Languages have a variety of ways of constructing sentences with different types of predicates – inverted copular sentences, clefts, pseudoclefts, NPCs, etc. – and, because of the interpretive differences that result from different predicate types, the choice between these sentences is one of the means by which speakers communicate what alternatives are relevant.

9.1.3 Focus-sensitive operators

While the predicative proposal above unified some kinds of marking of focus, it should not be taken as a suggestion that all kinds of focus marking can or should be unified into a single phenomenon. In §1.6 and Chapter 5, I take “focus” to be a uniform semantic phenomenon – the phenomenon by which some semantic calculations need access to a secondary, variable denotation of sentential elements in addition to the default denotation – but treat as “focus marking” any sentential phenomenon that allows the listener to narrow down what sentential elements are foci.⁵

Kwak’wala appears to have several different ways to mark focus (in the broad sense above), but it should be noted that the various means (intonation, clefts, etc.) that we usually label as “focus marking” are not obligatory, or even close to obligatory, in Kwak’wala. Even if it does exist, Kwak’wala intonational focus marking does not seem to be especially common, or it is sufficiently mild that it cannot always be detected; in any case, listeners do not appear to use it to resolve focus possibilities (§6.3). Meanwhile, marking focus by predication is also not obligatory; it is not uncommon, but nor is it as ubiquitous as the predicative focus marking in Nłeʔkepmxcín (Koch, 2008) (§6.4.1).

Rather, the most frequent means of focus marking (in the broad sense) in Kwak’wala appears to be through the use of focus operators (Chapter 7), particularly the common auxiliary *ʔo-*, which indicates the presence of a focus (and an exclusive interpretation of it) within the sentential predicate. Although additive operators do not, on their own, allow the listener to narrow down the location of focus, exclusive operators do; each exclusive operator allows the listener to deduce that there is a focus within a particular sentential constituent. *hig-* associates with a focus in the subject, *ʔo-* with a focus in the predicate, and *ʔat-* with a focus in the temporal adjunct.

⁵Note that if we define “focus marking” in this way, it is almost inevitable that we come to the conclusion that a variety of independent phenomena mark focus. Otherwise, we would be concluding that there is only one deductive path by which listeners can ever deduce which elements are foci, which is possible but unlikely.

(764) a. *Context: No one else drinks coffee in the morning, so I make a pot just for myself.*

higamən naqa ʃa kafɪ ʃa ɡəʔala
 higa=ʔm=n naqa ʃa kafɪ ʃa ɡʔ-ala
 only=VER=1 drink ACC coffee ACC early-ONGOING
 “Only I drink coffee in the morning.” (=487a)

b. *Context: It takes me a long time in the morning to work up an appetite, so I skip breakfast and drink a coffee instead.*

ʔonaxʷamən kafiɡa ʃa ɡəʔala
 ʔwa=naxʷa=ʔm=n kafɪ-ga ʃa ɡʔ-ala
 so=ever=VER=1 coffee-consume ACC early-ONGOING
 “I only **drink coffee** in the morning.” (=487b)

c. *Context: I am a morning coffee drinker, but if I have coffee at any other time of day it disrupts my sleep schedule.*

ʔalnaxʷamən kafɪɡa ʃa ɡəʔala
 ʔal=naxʷa=ʔm=n kafɪ-ga ʃa ɡʔ-ala
 late=ever=VER=1 coffee-consume ACC early-ONGOING
 “I only drink coffee **in the morning**.” (=487c)

These operators allow the listener to narrow down the possible focus interpretations; while there might be other foci in the sentence or not, a sentence like that in (764b) at least allows the listener to deduce that *kafiɡa* is a focus.

Within the designated constituent, however, focus interpretation is free; any of the subconstituents might be the focus. That is to say, a sentence like (765), the presence of *hig-* indicates that some subconstituent of *=ida sačəm kiʎanəms Laura* (“the spring salmon that Laura caught”) is a focus, but does not narrow down what subconstituent is the focus.

(765) higamən həmʔicəwida
 higa=ʔm=n hm-xʔid-sw=i=da
 only=VER=1 eat-CHANGE-PASS=3DIST=DET
 sačəm kiʎanəms Laura
 sas-_{eh}m kiʎ-_wanm=s Laura
 spring.salmon-genuine net.fish-obtained=3POSS Laura
 “I only ate **the spring salmon that Laura caught...**” (=510)

In §7.5, I modeled the behavior of Kwak’wala focus operators using a two-mechanism “hy-

brid” (cf. Krifka, 2006) theory of focus association (§5.6), in which focus operators have a syntactic relationship with a potentially larger phrase (the “focus phrase”) containing the focus, but in which the alternatives to that phrase are resolved using the pragmatic mechanism detailed in §5.3. These two mechanisms each constrain possible interpretations of focus operators in different ways, and result in the partially-fixed, partially-free interpretations of Kwak’wala focus operators.

9.1.4 Polarity and focus

An interesting question that arises, when considering focus in languages like Kwak’wala or Nleʔkepmxcín that appear to rely primarily on predication to express focus, is how elements that *cannot* be predicates can be focused. There are various functional elements (polarity, modality, tense, evidentiality, etc.), presumably associated with functional heads in the clausal spine rather than predicate or argument positions, and for which there is no means to make them into predicates. By what means – if any – can speakers communicate that a polarity/modality/tense/etc. contrast is relevant to the interpretation of their utterance?

In Chapter 8, I discuss the existence of a dedicated means by which Kwak’wala speakers can indicate the relevance to the discourse of a polarity contrast: the “discourse” enclitic =ʔm. It appears systematically in response to yes/no questions, and systematically fails to appear in response to WH questions (unless other conditions are met).

(766) a. pə́laməʔeda.
 pə́l=ʔm=a=i=da
 fly=VER=QUES=3DIST=DET
 “Is that a plane?”

b. pə́lamida.
 pə́la=ʔm=i=da
 fly=VER=3DIST=DET
 “Yes. That’s a plane.”

(Powell et al., 1981a, p. 10) (=608)

(767) a. mačalida?
 mas-_hał=i=da
 what-kind=3DIST=DET
 “What’s that? (pointing way over there)”

- b. pəλida.
 pλ=i=da
 fly=3_{DIST}=DET
 “That’s a plane.”

(Powell et al., 1981a, p. 10) (=607)

What makes =?m particularly interesting is that it indicates, obligatorily and morphologically, a distinction that in English and related languages is marked optionally and indirectly, by a particular sentential accentuation strategy (the *verum* accent) wherein the accent falls not on an overt polarity particle but on any word that happens to occupy a particular sentential position. This accentuation strategy cannot be used as a general *diagnostic* for polarity focus, as it is not obligatory and aside from that difficult to tease out in sentences that otherwise have complex intonations like additive sentences (cf. Krifka, 1998; Rullmann, 2003).

Kwak’wala =?m, on the other hand, is nearly ubiquitous, occurring in a wide variety of sentence types that do not, on first inspection, seem to belong to a natural semantic or pragmatic class. Nonetheless, I hypothesized in Chapter 8 that =?m always indicates the presence of a polarity contrast; that is, that =?m forms a diagnostic (with a few exceptions) for the class of sentences to which polarity contrasts are relevant.

In particular, there are two classes of sentences where the systematic presence of =?m is of especial interest in the semantics and pragmatics of polarity: yes/no questions, and additive/exclusive sentences.

In both English and Kwak’wala, the form of a yes/no question – or, at least, aspects of the form of a yes/no question, like its structure, intonation, or morphology – is used to express a variety of pragmatic moves; not all of them serve to ask the listener which of *P* and *not P* is true. =?m appears in some Kwak’wala yes/no questions, but not others; I proposed in §8.4.1 and §8.6.2 that =?m appears exactly in those questions in which the speaker is genuinely asking which of *P* and *not P* is true. That is, I proposed that =?m distinguishes “bipolar” questions in the sense of Krifka (2013) from “monopolar” questions (“You’re sad?”) that just request confirmation of *P*, and fixed-set alternative questions (“Do you want coffee, or tea?”) that ask which of *P*, *Q*, etc. is true.

Also, =?m appears obligatorily in additive and exclusive sentences. I proposed in §8.7, following a line of inquiry from Krifka (1998) and Rullmann (2003), that additive and exclusive sentences have “complex bipolar” alternative sets like {*P*, *not P*, *Q*, *not Q*, ...}, in which both polarity and constituent-type contrasts are present. That is, additive and exclusive answers would directly correspond to implicit “complex bipolar” questions – a question type that is rarely overtly asked but whose necessity to the pragmatic system can be inferred from answering patterns (§8.7.1.2, §8.7.3.1).

Kwak'wala =?m thus serves to illustrate the comparative ubiquity of polarity contrasts in discourse, an ubiquity that, in Germanic languages, is somewhat obscured by the indirectness and optionality of *verum*-marking strategies. The direct and obligatory Kwak'wala =?m, on the other hand, illustrates that questions and answers are indeed sensitive to the presence and absence of polarity contrasts, and therefore that our formal representations of the structure of discourse must be such that the presence or absence of a polarity contrast makes a difference to the semantics of questions and the pragmatics of answers (§8.6.2, §8.6.2.1, §8.7.1.3).

9.2 Descriptive contributions

In addition to the theoretical conclusions above, this work also serves as a descriptive synthesis, attempting a relatively consistent account of modern Kwak'wala phonology, morphophonology, morphology, and syntax, although much more remains to be described. The language I have observed is not identical to that described by Boas, but in many ways it is very similar; many of the more subtle patterns Boas found still describe my own data, and many of the novel observations I have made about modern Kwak'wala also characterize Boas's data.

Many of the observations that have come together in this synthesis have been made elsewhere, but in the absence of a modern pedagogical or reference grammar, I have tried to synthesize them into a consistent picture of Kwak'wala, in order to support my descriptions of, and arguments concerning, the focus phenomena described above. However, some of my observations are, to my knowledge, novel, which I catalogue below.

9.2.1 Word class

In Chapter 3, I offer a number of observations regarding word class in Kwak'wala; a few of these have been observed in other works (Boas, 1911; Boas et al., 1947; Sardinha, 2013), and almost all the observations have direct parallels in related and neighboring languages (cf. Jacobsen, 1979; Demirdache and Matthewson, 1995; Davis and Matthewson, 1999; Wojdak, 2001, among many others), but most are novel observations within the Kwak'wala literature. I conclude that there are a number of phenomena – within the morphology, syntax, and even discourse pragmatics – in Kwak'wala that are sensitive to a noun/verb/adjective-like distinction, and that the evidence for a *lack* of word classes is not particularly strong.

9.2.2 Copular sentences

In Chapter 4, I offer an in-depth characterization of copular sentences. While previous works (e.g. Boas et al., 1947; Anderson, 1984; Sherer, 2014) have observed morphosyntactic anomalies in such sentences, the overall morphosyntactic and semantic systematicity of Kwak’wala copular sentences has not heretofore been established. That is, it is not just that these sentences happen to be irregular with respect to some or another phenomenon observable in ordinary Kwak’wala sentences; rather, they are a distinct sentence type altogether, regular and predictable in their meaning and expression.

I offer a typology of these sentences, in which copular sentences are distinguished according to whether the subject is coreferential with the subject of the embedded copular complement, or a locative-like argument. In the latter sentences, an apparent variety of argument types can be coreferential, but what they all have in common is that they are the arguments that would have been promoted by the nominalizer *-was*.

I also observe that some additional sentence types – exclusive sentences with *hig-*, negative sentences with *kəyos*, presentational sentences, many disjunctions, and various kinds of questions built with the *wi-* root – all fit the morphosyntactic template of a copular sentence rather than a predicational sentence.

9.2.3 Phonology and morphophonology

The phonological and morphophonological system described in Appendix A is largely a synthesis of previous observations, with assumptions most similar to those in Lincoln and Rath (1980). However, the synthesis as a whole, as well as the arguments for it, are novel, in particular the phonological treatment of /a/ as something like a glottal-place plain resonant parallel to /y/ and /w/.

This treatment simplifies several phonological and morphophonological alternations that *a*-final morphemes undergo, which is important for this investigation because several morphemes of particular note here are *a*-final morphemes: the embedding *=a* of copular sentences in Chapter 4, the additive *=ǰa* in Chapter 7, and the questioning marker *=a* seen especially in Chapter 8. Without recognizing the uniform underlying form of /a/’s diverse phonetic realizations, it is harder to recognize the systematicity of the expression of copular sentences, additives, and yes/no questions.

9.2.4 Morphology and syntax

There are several novel morphological and syntactic observations made in Appendix B.

- I offer some sentences in §B.4.4.5 that argue against =iʔs expressing a possessor’s coreference with the subject, and suggest that instead it expresses the coreference of the possessor with the topic.
- I call attention to a morphological division – at least implicit in Boas et al. (1947), and partially (re)discovered in Levine (1980) – between “participant” or “voice” suffixes added at different morphological levels (instead of verbal suffixes on the one hand, and after verbal suffixes on the other). I observe that suffixes attached at these different levels tend to have different effects on the semantics of the resulting stem (§B.3.4.1).
- The description of enclitic “fall through” in §B.4.4.1 is, to my knowledge, novel.
- I present some new data regarding the distribution of the determiner =da in §B.4.4.4, although I do not come to any new conclusions regarding its meaning or function.
- I make some observations, in §3.3.3.2 and §B.4.4.6, suggesting that tense in noun phrases is clausal – that is, that tensed nouns originate as headless relative clauses.
- The description of “in subordinate” clauses (§B.6.6.4) – utterances that appear to take the form of subordinate or nominalized clauses without an embedding clause – is, to my knowledge, novel.

9.3 Focus and field investigation

Finally, this investigation also argues for a methodological point. Various mysteries regarding the meaning, use, and formal properties of certain Kwak’wala phenomena were resolved readily when discourse considerations (like what the question under discussion is) were made explicit in the elicitation context.

Many of these resolutions would have been difficult or impossible solely through textual analysis, since considerations like the question under discussion are often only implicit in monologues. Meanwhile, dialogues, while present in Kwak’wala texts, do not make up the bulk of sentences.

However, elicitation of translations of, and judgments on, out-of-context sentences would not necessarily have resolved these mysteries either. One of the lessons of the Matthewson-style (2004) elicitation methodology is that when speakers are asked for a judgment on a sentence (or even for a translation of a sentence) in the absence of an explicit context, speakers have to invent that context for themselves, and it might not be the context that the elicitor intends or has

in mind. This can obscure semantic distinctions that, if the context had been explicit, would have been systematic and straightforwardly observable.

This also applies to aspects of the pragmatic context, like what alternatives are relevant or what the informational goals the speaker of the sentence might be trying to achieve by their utterance. Even when we specify a “world”-context (like what other things are true in the world-of-utterance) it is often the case that we as fieldworkers do not also specify the discourse context (like what else has been said); in those cases where I or other elicitors have not done this, some question-sensitive phenomena (especially the presence or absence of *=?m*) have occurred more or less at random, presumably according to which kind of question the speaker was imagining was intended.

On the other hand, when I was careful to record the larger discourse context, and (when there was no real-world discourse context to record) specify the discourse context within an overt semantic context, the pragmatic distinctions made by the different constructions and morphemes were systematic and (relatively) easily observable. The discoveries in Part III – the conditions for the use of nominal predicates and of cleft vs. canonical equative sentences, the conditions for the use of the different exclusive operators, and the conditions for the use of *=?m* in answers and especially in questions – all had systematic relationships to the context, but were at best difficult (and at worst, impossible) to observe when treating sentences in isolation.

Even some of the more basic discoveries in Part II depended on more careful consideration of discourse factors. The apparent lack of a noun/verb distinction in Wakashan depends in part on the apparent interchangeability of sentence pairs like those in (768).

- (768) a. $d\acute{o}n\check{x}\acute{o}lida$ $\acute{c}a\acute{y}a$
 $dn\check{x}-l=i=da$ $\acute{c}a\acute{y}a$
 sing-ONGOING= 3_{DIST} =DET younger.sib
 “The younger brother is singing.” (=126b)
- b. $\acute{c}a\acute{y}ida$ $d\acute{o}n\check{x}\acute{o}le?$
 $\acute{c}a\acute{y}=i=da$ $dn\check{x}-la=a?$
 younger.sib= 3_{DIST} =DET sing-ONGOING=INVIS
 “The younger brother is singing.” (=126c)

If, however, we are explicit about the larger discourse, we can observe that these sentences do indeed have different properties – (768a) is a potential answer to certain questions that (768b) is not a potential answer to – leaving the question of what, if not the fact that (768b) has a nominal predicate and verbal subject, is the relevant difference between these sentences.

9.4 Cross-linguistic pragmatics

The investigation of focus – and more broadly, common-ground management – in unfamiliar languages like Kwak’wala thus serves two goals.

On the one hand, every language has some variety of phenomena (morphemes, sentential structures, intonations, etc.) that speakers use to express the way their current utterance addresses larger conversational goals and strategies. If we do not look for these (by, for example, being explicit during elicitation about what question each answer addresses), then these morphemes, structures, etc. will either remain mysterious or go entirely unremarked. When these phenomena are not understood, then what speakers are expressing through them will likewise not be understood; as I noted in §1.6.6, focus is one of the primary ways speakers reveal what is otherwise left unspoken, and in the absence of understanding focus expression in a language, these things remain unspoken.

On the other hand, once these phenomena are understood, even partially, we can better understand the way focus, and other common-ground management phenomena, work in human language in general. One of the most difficult tasks in pragmatics is to line up conversational strategies (which are complex and social by nature) with the linguistic expressions of these (which are likewise complex and, in languages like English, primarily expressed through variations in continuous signals like pitch).

For each language we study, we can better resolve what the possible conversational strategies are and in what possible ways they can be expressed. Different languages express different distinctions by different means; English marks constituent-type contrasts to a greater degree than Kwak’wala, while Kwak’wala marks polarity-type contrasts to a greater degree. Taken together, we can observe that discourse contexts – and moreover, humans’ mental representations of discourse contexts – must be richer than would be obvious in either language, considered on its own.

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Appendix A

Phonology and morphophonology

A.1 Introduction

In this appendix, and in Appendix B, I describe Kwak’wala grammar in more detail, to serve as a reference for many of the phenomena that I invoke in the main work, and to argue for some of the analytical choices I have made (e.g., to choose one underlying form over another, to consider a particular morpheme enclitic rather than suffixal, etc.).

Kwak’wala phonology and morphophonology are of notable complexity, with a large inventory of consonants, a fairly rich inventory of surface vowels (many of which seem to be underlyingly consonants or epenthetic), and various mutations that change the form of stems. These factors combine into a system in which instances of the same morpheme can have dramatically different forms.

Consider, as an example, the surface forms of the root for “wipe”. Depending on whether the suffix begins in a vowel, a consonant, whether it mutates the stem-final consonant, and whether it inserts an [a] into the stem (§A.7.3), the root can surface in a variety of forms.

(769) a. **di**xʔid
dy-xʔid
wipe-CHANGE
“to wipe something”

b. **dε**
dy-a
wipe-A
“to wipe”

(Boas et al., 1947, p. 308)

c. **dayǎstənd**
 dy-_{ew}ǎst-nd
 wipe-mouth-CHANGE
 “to wipe one’s mouth”

d. **dəʔelbənd**
 dy-_wilb-nd
 wipe-nose-CHANGE
 “to wipe one’s nose”

e. **diʔǎstanu**
 dy-_hǎst-_wanu
 wipe-end-INSTR
 “toilet paper”

(FirstVoices, 2009)

This is not just an irregularity of this specific root, or a property of roots in general; it is a general property of Kwak’wala phonology and morphophonology. We can also see such alternatives with suffixes like -*čw* (“in”), which usually surfaces as [-*čo*] but can be seen to have a variety of forms.

(770) a. **ǧax^wčəw^əas**
 ǧax^w-čw-_was
 hang-**in**-PLACE
 “hanger”

(FirstVoices, 2009)

b. **g^wəǧč^əola**
 g^wəǧ-čw-ala
 pour-**in**-ONGOING
 “pouring something into a container”

c. **g^wəǧč^əud**
 g^wəǧ-čw-d
 pour-**in**-CHANGE
 “pour something into a container”

The forms that a word takes are usually predictable, but accounting for some of the more dramatic changes, like those in (771), requires us to assume that Kwak’wala underlying forms are quite different from their surface forms.

	<i>məx^w</i> (“to desire”)	+ <i>ɫ</i>	= <i>mut</i> (“desired”)
	<i>piχ^w</i> (“to feel”)	+ <i>ɫ</i>	= <i>pəyul</i> (“felt”)
(771)	<i>g^was</i> (“to chap”)	+ <i>ɫ</i>	= <i>g^weɫ</i> (“chapped”)
	<i>k^wəns</i> (“to bake bread”)	+ <i>k^w</i>	= <i>k^wənik^w</i> (“bread”)
	<i>gul</i> (“to eat while traveling”)	+ <i>k^w</i>	= <i>gəwəlk^w</i> (“food for travel”)
	<i>x^was</i> (“to excite”)	+ <i>k^w</i>	= <i>x^wek^w</i> (“excited”)

Accounting for these changes is important, not simply for their own sake, but because much of Kwak’wala morphosyntactic analysis depends on recognizing morphemes when they appear. For example, all of the derived forms in (771) are varieties of “passive” forms (§B.3.4), and passives are very important when considering Kwak’wala sentence structure, but recognizing a passive stem requires recognizing that it stands in a regular relationship to a familiar active stems.

A.1.1 Structure of this appendix

I will first consider the segmental inventory of Kwak’wala in §A.2, concentrating in that section primarily on the consonant inventory. Before continuing to a more detailed examination of the vowel system in §A.5, I will detour into an examination of phonotactics, syllabification, and stress (§A.3–§A.4). This is because much of the evidence presented in §A.5 consists of observations of how vowel realizations change (and how vowels alternate with non-vowels and sequences of segments not all of which are vowels) when the shape of the word changes.¹

I will then briefly consider some other phonological alternations (§A.6) before considering in detail the morphophonological alternations (mutation, lengthening, reduplication, and consonant loss) that occur during morphological derivation (§A.7).

A.2 Inventory

Kwak’wala has a large inventory of consonants, particularly in the dorsal and lateral series (Table A.1).

When they appear word-initially, voiced stops and affricates (*b*, *g*, etc.) are realized as voiceless unaspirated stops (Mayer, 2010).

Non-rounded velar consonants (*k*, *k’*, *g*, *x*) are palatalized; they also front /a/ towards [æ] and sometimes towards [ɛ]. *λ*, *λ’*, and *λ* represent the voiceless, voiceless ejective, and voiced

¹Since many of these alternations occur due to stem modification, it might also be valuable for the reader to skip ahead and scan the sections on stem mutation (§A.7.1) and stem lengthening before returning to consider vowel changes.

	Labial	Coronal	Velar	Uvular	Glottal
Ejective	\dot{p}	$\dot{t} \dot{\lambda} \dot{c}$	$\dot{k} \dot{k}^w$	$\dot{q} \dot{q}^w$	
Voiceless	p	t λ c	k k ^w	q q ^w	ʔ
Voiced	b	d λ d ^z	g g ^w	ǰ ǰ ^w	
Fricative		s ʃ	x x ^w	χ χ ^w	h
Nasal	m	n			
Glottalized nasal	\dot{m}	\dot{n}			
Approximant	w	y l			
Glottalized approx.	\dot{w}	$\dot{y} \dot{l}$			

Table A.1: Kwak’wala consonants

	Front	Center	Back
High	i		u
Mid	e	ə	o
Low		a	

Table A.2: Kwak’wala (orthographic) vowels

lateral affricates. The plain coronal stops (*t*, *t’*, *d*) seem to be dental; the non-lateral affricates (*c*, *c’*, *d^z*) vary between alveolar and postalveolar.

The Kwak’wala vowel system is more uncertain; while there are many distinct surface vowels (I have encountered at least [i], [ɪ], [e], [ɛ], [æ], [ə], [a], [o], [ʊ], and [u]), the number of underlying vowels could be as few as one (/a/) or as many as seven (/i/, /e/, /ɛ/, /ə/, /a/, /o/, and /u/).

Kwak’wala is typically written with six vowels, *i*, *e*, *ə*, *a*, *o*, and *u* (Table A.2); three of these (*i*, *a*, *u*) are frequent and probably phonemic, although many instances of [i] and [u] are derived from /y/ and /w/. The mid vowels (*e* and *o*) are more marginal and many (and perhaps all) are derived from sequences of {/a/, /i~y/, and /u~w/} (Boas et al., 1947; Bach, 1975) (but note the caveats in §A.5.1); the schwa (ə) is often (and perhaps always) epenthetic (Grubb, 1977) (but note the caveats in §A.5.2). The realization of the schwa depends on the neighboring consonants, with rounded consonants moving the schwa towards [ʊ], palatal and palatalized consonants moving it towards [ɪ], and coronal consonants fronting it somewhat.

I will consider the derivation of the vowels in more detail in §A.5.

The most important phonological division for Kwak’wala is the distinction between, on one hand, full (i.e., non-schwa) vowels and plain resonants (*m*, *n*, *l*, *y*, and *w*), and, on the other hand, all other sounds. I will term the first category **+R** segments and the latter **-R**. There are various ways in which +R and -R segments are treated differently:

- +R segments are treated differently for the purposes of stress (§A.4).

- +R segments are treated differently by reduplication (§A.7.2).
- Some morphophonological processes are sensitive to the presence of +R segments; for example, the voice suffix *-ewas* is only lengthening after a +R root.
- Except for a very few exceptions, like *xumʔs* (“head”), syllable rhymes will only contain one +R segment.

Since mutation can turn +R segments into -R segments, and -R segments into +R segments, mutating suffixes can be the source of significant shifts in syllabification and stress like those in (771).

A.2.1 “Plain” consonants

It is useful to single out some Kwak’wala consonants – specifically, *p, t, c, ʔ, k, kʷ, q, qʷ, s, l, x, xʷ, ʃ, ʃʷ, m, n, l, y,* and *w* – as being “normal”, and the other consonants as being in some way marked. I will refer to the former as “plain” consonants.

Plain consonants undergo regular mutations (§A.7.1), whereas the other consonants have a special realization (§A.7.1.4). Plain consonants also regularly appear at the end of morphemes (with the exception of *c*), whereas there are comparatively few roots and suffixes whose underlying forms end in vowels or non-plain consonants.

A.2.1.1 Plain resonants

Plain resonants – the “+R” consonants *m, n, l, y,* and *w* – are treated specially in other ways as well.

Various suffixes have special realizations or irregular patterns after plain resonants. For example, some weakening suffixes like *-wayu* (instrumental nominalization) do not weaken plain resonants (§A.7.1.3), and some lengthening suffixes only lengthen consonant+resonant roots like *cy-* (“draw water”) (§A.7.3).

For the purposes of syllabification and stress, *m, n, l, y,* and *w* can pattern like vowels, the first three realized as [ə_m], [ə_n], and [ə_l] and the latter two surfacing as [i] and [u] respectively (cf. §A.5).

In this investigation, I treat the resonants as if they themselves fill the syllabic nucleus – that is, as if a syllable *ʔən* were just *ʔn*, with the *n* filling the syllabic nucleus – for several reasons. For one, the pre-resonant schwa, although it can be seen instrumentally, appears only as a brief transition into the resonant itself, and when schwa-resonant syllables are stressed the pitch peak is seen on the resonant rather than the schwa (Jonathan Janzen, p.c.). Resonants in

this position also preclude a vowel other than schwa occurring in the nucleus (Struijke, 1998).² Moreover, “-*rmut*”-type reduplication (§A.7.2) takes with it “coda” resonants, while all other codas are prevented from occurring in these reduplicants – as Struijke (1998, p. 172) notes, “Apparently reduplicants only allow moraic consonants (i.e. unglottalized sonorants) in coda position” – and again it would require special constraints to capture this difference; it is more straightforward to say that the reduplicants in question may contain any nuclei (vowel or plain resonant) and do not contain codas at all.

I note in §A.5.3 some ways that /a/ acts as if it were a plain resonant as well, or, put another way, that at least some instances of [a] correspond to a plain glottal resonant (that is, a resonant with a glottal place of articulation, but not a “glottalized resonant”), parallel to the way that [i] and [u] correspond to /y/ and /w/.

A.2.2 Ejective stops, ejective affricates, voiced stops, and voiced affricates

The ejective series of stops and affricates are frequent word-initially³, but are rare elsewhere; there are only a few roots and suffixes that seem to have a non-derived ejective in medial or final position within the morpheme. Voiced oral stops and affricates are also most frequent word-initially, although they occur with more frequency than ejective stops and affricates in non-initial positions.

In general, however, whenever one finds a word-medial ejective or voiced stop/affricate, it is often a clue that the word is morphologically complex. Indeed, the morphophonological complexities seen in §A.7, once mastered, are actually of benefit to the morphologist and the learner; the frequency with which suffixes are mutating, and the infrequency with which the resulting sounds appear word-medially, means that Kwak’wala words often are self-segmenting, even when we cannot always pin down what each morpheme means. For example, *kadəg^waci* (“envelope, mailbox”) contains three non-plain segments ([d], [g^w], and [ç]), suggesting that this word contains four morphemes, with the first three ending in /t/, /k^w/, and /s/.

²Actually, there are a very few exceptions to this; the only such word I encounter frequently is *xumʔs* (“head”), which *could* possibly be /xumʔs/, but there are nonetheless a few other attested forms that have both vowels and plain resonant codas (Kalmar, 1999; Bach et al., 2005). Overwhelmingly, however, syllables are either CV(C+) or CR(C+), a suggestive distribution even if it is not categorical.

³Note that, since there are no prefixes in Kwak’wala that are not reduplicative, “word-initial” also means “root-initial” (§2.2.1).

- (772) $\acute{k}ad\acute{a}g^w\acute{a}\acute{c}i$
 $\acute{k}at\text{-}_w\acute{k}^w\text{-}_w\acute{a}s\text{-}_h\acute{i}$
 write-PART-PLACE-NMZ
 “envelope, mailbox” (very literally: “thing that is a place for something written”)

Even if none of these morphemes were familiar, the form of the resulting stem would provide an initial hypothesis about the morpheme breakdown; very often this proves to be the genuine breakdown as well.

A.2.3 Glottalized resonants

The glottalized resonants \acute{m} , \acute{n} , \acute{l} , \acute{y} , and \acute{w} are usually expressed with preglottalization – that is, they are expressed as $^{\prime}m$, $^{\prime}n$, $^{\prime}l$, $^{\prime}y$, and $^{\prime}w$.

When preceding consonants – that is, consonants that are not themselves nuclei – / \acute{y} / and / \acute{w} / are realized as [iʔ] and [uʔ] respectively (§A.5.5); where / $\acute{a}\acute{y}$ / and / $\acute{a}\acute{w}$ / precede consonants, they are realized as [eʔ] and [oʔ] respectively (§A.5.7).

Boas et al. (1947, p. 208) assert that “syllabic and non-syllabic $^{\epsilon}m$, $^{\epsilon}n$, and $^{\epsilon}l$ are identical. As a matter of convenience in reading we have written $^{\epsilon}EM$, $^{\epsilon}EN$, $^{\epsilon}EL$.” Boas is referring to alternations like the following:

- (773) a. $l\acute{a}\acute{\gamma}am$
 “and then...”
 b. $l\acute{a}\acute{m}i$
 “and then he/she/it [distal]...”

Boas assumes that [ʔam] and [m̥] are both realizations of / \acute{m} /. I do not assume this; in my phonemicization, I treat some instances of [m̥] as / \acute{m} / and others as the sequence /ʔm/, with the most noticeable difference being that / \acute{m} /, being a single segment, cannot receive an epenthetic [ə] in the middle – $h\acute{a}\acute{m}x\acute{\gamma}id$ (“to eat”) but not $*h\acute{a}\acute{\gamma}\acute{a}\acute{m}x\acute{\gamma}id$ – whereas /ʔm/ can and frequently does. The morpheme seen in (773) I treat as /ʔm/ (Chapter 8).

At the ends of words, a $V\acute{\gamma}$ sequence is often pronounced (and transcribed) with a final [i]. For example, the word $h\acute{a}\acute{m}e\acute{\gamma}$ (“food”) is often realized as $h\acute{a}\acute{m}\acute{a}\acute{\gamma}i$. This [i], however, does not survive when vowels follow – “your food” is $h\acute{a}\acute{m}\acute{a}\acute{\gamma}u\acute{\gamma}s$ rather than $*h\acute{a}\acute{m}\acute{a}\acute{\gamma}iyu\acute{\gamma}s$ or similar.

- (774) a. $h\acute{o}m\acute{e}ʔ \sim h\acute{o}m\acute{a}y\acute{i}$
 $hm\text{-}a\acute{y}$
 eat-NMZ
 “food”
- b. $p\acute{o}t\acute{e}ʔ \sim p\acute{o}t\acute{a}y\acute{i}$
 $pt\text{-}h\text{-}a\acute{y}$
 medicine-NMZ
 “medicine”
- c. $neʔ \sim na\acute{y}i$
 $n\text{-}a\acute{y}$
 snow-NMZ
 “snow (on the ground)”
- d. $\acute{q}^wax\acute{\lambda}o\acute{y} \sim \acute{q}^wax\acute{\lambda}o\acute{y}i$
 $\acute{q}^wax\text{-}\acute{\lambda}w\text{-}a\acute{y}$
 grow-on.tree-NMZ
 “stick, branch”
- e. $\acute{p}o\acute{y} \sim \acute{p}o\acute{y}i$
 $\acute{p}w\text{-}a\acute{y}$
 halibut-NMZ
 “halibut”

The sequences $ay\acute{i}$ and $oy\acute{i}$ are sometimes transcribed as $a\acute{y}i$ and $o\acute{y}i$ as well.

A.2.4 ʔ

Glottal stops are phonemic in Kwak’wala, as we can see in pairs and near-pairs like those in (775) and (776).

(775) a. dəʔi(d)
 dʔ-xʔi(d)
 split.canoe-CHANGE
 “canoe splits in two” (FirstVoices, 2009)

b. dəʔʔi(d)
 dʔʔ-xʔid
 laugh-CHANGE
 “to laugh”

(776) a. ʔəmǰa
 ʔmǰa
 watertight.boat
 “a boat that is solid, not leaking” (FirstVoices, 2009)

b. ʔəmʔǰu
 ʔm-ʔxu
 smallʔ-neck
 “dumb (in the sense of unable to talk), sweater”

The glottal stop is not particularly phonologically prominent, and can be difficult to perceive; Boas (1900) described it as “a very faint laryngeal intonation” (p. 709). Many instances of the glottal stop are no more prominent than the phonetic preglottalization that occurs on English stops in codas; indeed, many such English words were borrowed into Kwak’wala with a glottal stop, indicating that English preglottalization was sufficient to be considered a glottal stop by Kwak’wala speakers.

(777) a. boʔt
 boʔt
 boat
 “boat”

b. bεʔt
 bεʔt
 dime
 “ten cents, dime”⁴

c. poʔp
poʔp
pop
“pop, soda”

d. buʔk^w
buʔk^w
book
“book”

e. keʔgəs
keʔgs
cake
“cake”

Accordingly, Kwak’wala glottal stops before consonants in words like *kʰiʔs* (“not”), *kʰəʔsta* (“cup”), or *məsiʔq^w* (“sea urchin”) can be very difficult for English speakers to perceive.

When glottal stops precede ejective stops, the results are particularly difficult to perceive, and are rarely transcribed, but are nonetheless faintly audible:

(778) a. woʔk^wala
woʔk^w-k_ha-la
bark-sound-ONGOING
“sound of a dog barking”

A.2.5 *h*

h only occurs at the beginnings of words. At some stage of the language, it may have been epenthetic, because it would disappear in reduplicated words like (779). Currently, however, speakers seem to treat it as underlying when reduplicating (780).

(779) həʔeləm
ha-iʔ-_{r_w}m
REDUP-correct-DIMIN
“health”

⁴From English “bit”, in the sense of “one-eighth of a Spanish dollar”, as in “Shave and a haircut: two bits.”

(780) hiʔhəmeʔ
 hỳ-hm-ay̌
 REDUP-eat-NMZ
 “foods, foodstuffs”

It should be noted that we cannot simultaneously maintain that *both* [h] and [ə] are epenthetic, because of words like those in (781).

(781) a. həmxʔid (*məxʔid)
 hm-xʔid
 eat-CHANGE
 “to eat”

b. həmuumu (*muumu)
 hmumu
 butterfly
 “butterfly”

Boas (1947) recognizes two variants of *h*, *h* and *h̥*, the latter with rougher frication.

A.3 Phonotactics

A.3.1 Consonant clusters

Kwak’wala has, in comparison to its relatives (Grubb, 1977; Lincoln and Rath, 1980; Howe, 2000), a greater tendency towards CV syllables (taking into account that under particular analyses, like this one, this *V* might include things that are resonants); as Boas (1900) observes, “Extensive clusters of consonants are rare, and even combinations of two consonants are restricted in number” (p. 710). Onset clusters are forbidden; we can see this clearly when we observe the treatment of English loans in (782).⁵

(782) a. pəlawas
 plawas
 flower
 “flower, flowers”

⁵It should be noted, however, that not all English loans obey Kwak’wala phonotactics, and even ones that do not (e.g. *skul*, “school”) can participate in further derivation as if they were normal Kwak’wala stems (“school” is more often expressed as *skuláci*).

- b. **pələmʔstu**
plm-ʔstw
plum-eye
 “purple”
- c. **dagəns**
dagns
stocking
 “sock(s), stocking(s)”
- d. **dəlo**
dlaw
draw
 “to draw” (a speaker’s semi-humorous attempt at making a verb for “to draw”)

There are coda clusters, although there are not a very large variety of them, when one considers the size of the consonant inventory. If one treats syllabic *m*, *n*, and *l* as being themselves nuclei, as I do (§A.2.1.1), the maximal coda is three segments – a dorsal fricative + *s* + a coronal stop/affricate – although there is a somewhat wider variety of two-consonant coda clusters.

Also, it should be noted that the inventory of possible consonant clusters in general – that is, ones made up of codas followed by onsets – is not simply the Cartesian product of possible codas and possible onsets; there are other restrictions as well. The full range of restrictions is not completely clear to me, but to give an example, except in a few reduplicated forms, it appears that at least some plain resonants cannot be onsets after a coda (e.g., ‘fish’ is [kʰutəla] rather than [kʰutla] even though *t* is a possible coda and *l* is a possible onset). Such a restriction does not seem to be merely historical, or due to the suffix *-(ə)la*, either; my own name is pronounced as [Patəlik], with a schwa to break up *t* and *l*.

A.3.2 Syllabification

In general, Kwak’wala syllabification must proceed right-to-left, segment by segment, in order to give the forms we see. When +R material is available and forming a nucleus would not leave a syllable without an onset, we form a nucleus with this material. When a +R segment is unavailable and a nucleus is needed – that is, when the segment cannot be treated as part of a valid consonant cluster – a schwa is inserted so that a nucleus can be formed.

We can illustrate this with (783).

(783) cəyən

cy=n

draw.water=l

“I draw water.”

(Boas et al., 1947, p. 212)

Proceeding leftward through /cyn/, we start with /n/. Since /n/ is +R, it can be a nucleus, and there is not already a nucleus, so we form a nucleus with it, giving [ən].⁶ Proceeding leftward again, we encounter /y/. Since /y/ is +R, it could potentially have become a nucleus, but making it a nucleus would violate the onset requirement (because *n* would be a syllable without an onset), so rather than make it [i] it just becomes the onset of this syllable, leading to [yən]. Proceeding leftward again, we encounter /c/. Since /c/ is -R, we cannot make it a nucleus, and it cannot be treated as part of a valid cluster here, so we insert a [ə] as a nucleus to make [əyən], and then add [c] as an onset to give us [cəyən].

We can see a similar process for *yəwənǰ*, in which there are several segments that are +R, but nonetheless do not become nuclei.

(784) yəwənǰ

yw-_hnǰ

wind-season

“windy season”

(Boas et al., 1947, p. 212)

Proceeding leftward through /ywnǰ/, we start with /ǰ/; this is -R and therefore cannot form a nucleus, leaving us simply with /ǰ/. The next (that is, preceding) segment, however, is +R, which can form a nucleus, resulting in [ənǰ]. Once we have gotten to this point, there is a decision about what to do with /w/. Despite being +R, it cannot be syllabified as a nucleus, because it would leave the syllable [ənǰ] without an onset, so it has to be syllabified as an onset, giving [wənǰ]. The next segment under consideration is /y/. Although /y/ is +R and a nucleus would be needed here, we cannot syllabify /y/ as a nucleus because the resulting syllable would be without an onset, so a schwa is inserted as the nucleus and the /y/ syllabified as an onset, giving [yəwənǰ].

Note that a left-to-right parse here would give us the wrong results for these words: we would have gotten something like *[cin] and *[yunǰ] instead; likewise, an account that works by parallel constraints will have to include constraints that at least fabricate the effects of a directional parse.

⁶Recall that I speak of resonants being the nuclei, rather than the schwa being the nucleus and the resonant being part of the coda; the schwa that precedes [n] here is just for illustrative purposes. That is to say, while I talk elsewhere (e.g., in §A.5.2) of true epenthetic schwas, I treat the schwa before a syllabic resonant as merely orthographic, indicating that the following resonant is a nucleus.

It should be noted that the syllabification procedure does need some degree of “lookahead”, however, and not just to ensure that syllables have onsets and illegal clusters are not formed. One special case in which lookahead would be necessary is when considering a coalescence of /ya/ into [ɛ]; as we will observe in §A.5.8, this coalescence only happens if the previous segment (which would be “ahead” in a right-to-left parse) can be syllabified as a nucleus. If the syllabification algorithm cannot take that into account in a case like (785), it would prematurely choose [ɛ] as the syllabic nucleus, syllabify the [n] as an onset, and get the form **ṃəneyu* instead.

- (785) *ṃənyayu* (**ṃəneyu*)
 ṃns-wayu
 measure-INSTR
 “ruler, measuring tape, scale”

Another case in which “lookahead” would be necessary would be to consider under what circumstances to syllabify the /w/ or /ẉ/ of suffixes like *-wsta* (“out of water, upriver”) and *-ẉt* (“fellow, companion”) (§A.6.5). If these suffixes follow certain consonants, they are realized as [-wəsta] and [-ẉət] rather than the [-usta] and [-uʔt] that we might expect, so if the syllabification procedure does not have access to the identity of the next segment, it would produce the wrong forms for these words.

I should also note that this algorithm only suffices for non-reduplicated words; Struijke (1998, 2000) considers some reduplicated forms like *wənwəẉmut* (“refuse of drilling”), in which this *w* is an onset in violation of the above algorithm, possibly because of some manner of reduplicant-base faithfulness effects. In general, however, reduplicated words introduce a host of phonological issues beyond those raised here, in particular because the syllabification and stress of a reduplicated form does not always seem to be predictable from its base form.

A.4 Word stress

A.4.1 Basic stress

Kwak’wala stress falls on the leftmost heavy syllable, so long as a heavy syllable exists; otherwise it falls on the rightmost syllable (Bach, 1975; Wilson, 1986; Struijke, 2000). Given the underlying forms and syllabification procedure proposed in this appendix, “heavy” just means having a +R nucleus.

- (786) a. qása
qasa
walk
“walk”
- b. cəsq^wána
cəsq^wana
bird
“bird”
- c. ʔəǰəlá
ʔǰ-la
do-ONGOING
“to use, to wear”
- (787) a. ʔúq^wa
ʔw-qa
so-feel
“to believe”
- b. ʔǰmləm
ʔm^l-_wm
play-NMZ
“toy”
- c. ʔətǰmdən
ʔt-(ǰ)m-d=n
hat-face-CHANGE=1
“I put on a hat.”
- d. pəgəd^wú
pk-_wd^w
flat-flat
“flat object, flat surface”

There are various apparent exceptions to this, in words like *guʔdán* (“horse”) and *kuʔd^wáci* (“potato patch”). However, it should be emphasized that the stress rule above does not mean that every apparent full vowel – every apparent [i], [u], etc. – can receive stress. The [uʔ] in these words corresponds to /w^w/, which is not a +R segment, and therefore this syllable is not

heavy (cf. §A.4.3.1, §A.4.3.2, §A.4.3.3).

It should also be emphasized that +R material (and therefore heavy syllables) sometimes correspond to underlyingly -R material, given that mutation (§A.7.1) can turn a -R segment into a +R segment. For example, in (788a), the underlying /s/ is weakened to *y*, which then surfaces (and is stressed) as [i], while in (788b), the underlying /x^w/ is weakened to *w*, which then surfaces (and is stressed) as [u].

- (788) a. dənídzu
dɪns-_wdzu
red.cedar.bark-surface
“flat cedar bark” (Boas et al., 1947, p. 212)
- b. p̣əyúł
p̣əy^w-_wł
feel-STIM
“felt”

Note also that it is not simply the leftmost +R segment that receives stress, because these might be syllabified as onsets instead of nuclei. Both (788a) and (788b) have +R material (*n* and *y* respectively) that, in other words built on these roots, is stressed; in these words, however, they are syllabified as onsets and are therefore ineligible for stress.

A.4.2 Default stress

Words without any heavy syllables are not particularly common, but such words receive final stress:

- (789) a. nəq^wól
nəq^wł
salal.berry
salal berry
- b. yəğól^w
yq-_wk^w
knit-PART
something knitted

- c. x^wəṕ̚əs
 x^wp̚_{-h}s
 hole-on.ground
 “hole in the ground”

A.4.3 Apparent violations

A.4.3.1 *ỵ* and *ẉ*

Most examples of apparent stress violation have *iʔ* or *uʔ* as their first syllable. However, I argue in §A.5.5 that many instances of *iʔ* and *uʔ* could be more consistently treated as being *ỵ* or *ẉ*, and are thus not +R segments at all.

- (790) a. guʔdán (*gúʔdan)
 gẉdan
 horse
 “horse”
- b. kuʔdʰáci (*kúʔdʰáci)
 kẉs_{-w}as_{-h}i
 potato-PLACE-NMZ
 “potato patch”
- c. giʔǎ́ (*gíʔǎ́)
 gỵ₋ǎ́
 put-down
 “to put down”

If this were not the case, we would have two puzzles: why the lexicon is such that *Cəỵ* and *Cəẉ* syllables never begin a word, even though other glottalized resonants can serve as codas of initial syllables (e.g. *həmʔid*, “to eat”), and why most words beginning in *Ciʔ* or *Cuʔ* violate stress assignment.

Sometimes, when the initial *uʔ* is followed by a sonorant, it sounds as if the sonorant is pre-glottalized:

- (791) a. ʔul'ígəŋ (*ʔúl'ígəŋ)
 ʔw'liŋŋ
 wolf
 wolf
- b. ʔum'ás
 ʔw'mas
 large
 “very large”⁷

A.4.3.2 əʔ

Similarly, the sequence əʔ frequently sounds like aʔ; we can see this when words like wədəʔstá are transcribed as wədəʔstá (as in Grubb 1977, p. 217), with an apparent stress violation.

- (792) wədəʔstá
 wd-ʔsta
 cold-water
 “cold water”

Also, a schwa before a glottalized resonant often sounds like [a], and is sometimes transcribed as such. For example, Grubb (1977) transcribes ʔəy'əʔsú (“hand”) as if it were ʔay'aʔsú.

- (793) ʔəy'əʔsú
 ʔy'ʔsu
 hand
 “hand”

Many of these transcriptions were adopted by the FirstVoices (2009) dictionary, but it is often not apparent there that such words would be stress violations from the text alone, because the pronunciation guides often “reassign” the stress to what it should have been if the vowel were actually /a/. That is, the pronunciation guide indicates stress on the first syllables of words like k'əʔstá (“teacup”, actually k'əʔstá) and ʔay'aʔsu (actually ʔəy'əʔsú), although in the accompanying recordings the speaker fairly clearly stresses the final syllables of these.⁸

⁷This is not to be confused with ʔúma (“chieftainess, noblewoman”), in which the stress falls on the initial syllable, suggesting an underlying form beginning in ʔum- rather than ʔwm.

⁸This also occurs sometimes for words in which FirstVoices (2009) has transcribed the bilabial glottalized resonant m' as <m'> rather than <'m>; words that they spell in this way (including ǵəmx'əlá, “use your left hand”; həmgila “to feed”, and cəmx'əlid “to melt”) are frequently given incorrect initial stress. These problems suggest that

A.4.3.3 Surrounding palatals

There is one very common apparent violation, [k'iyós] (“no, none”)⁹, but I believe this is actually *k'ayus* with the schwa realized as *i* or possibly *ɪ* due to the influence from two surrounding palatals, and the /u/ realized as [o] due to the same sort of post-schwa lowering we see after [əʔ].

- (794) k'ayós [k'iyós]
k'yus
none
“no, none”

Evidence for this form not having an underlying vowel in the first syllable comes from the effect of the lengthening suffix *-ehm* (“real, genuine”), which does indeed act as if the underlying form were /k'yus/; if /i/ were underlying this stem would not have received a lengthening [a].

- (795) k'áyucəmən dala
k'yus-*h*m=n dala
no-genuine=1 dollar
“I have no money at all.”

A.4.3.4 Exclamations

It should also be noted here that sometimes exclamations can be given a final-syllable stress, regardless of their phonological structure. For example, *ʔalhaʔən*, which should have initial stress, and does so in the dictionary (Grubb, 1977, p. 158), may receive final stress when exclaimed:

- (796) ʔalhaʔén
ʔalhaʔn
silly
“How funny!”

the pronunciation guides may have been compiled based on the transcriptions rather than the recordings, since the pronunciation guide reflects the stress that the word *would* have had, if those transcriptions had been fully accurate.

⁹The *-s* here is a morphological formative of unclear meaning, as we can see from the verbal form [k'iyóxʷʔid] (“to disappear, to become absent”).

In the Grubb dictionary (1977, p. 183) and the FirstVoices word list (2009), most of these negative stems are assigned initial stress (e.g. *k'iyos*), but this seems to be an error; the recordings on the FirstVoices site clearly exhibits stress on the [o].

A.4.3.5 Loanwords

Also, some loanwords like “bus”, although they have a schwa-like vowel, act as if the schwa is the nuclear segment for the purposes of stress.¹⁰

- (797) *báscola* (not: *bascóla*)
bəs-çó-la
bus-in-ONGOING
to take the bus

A.5 Vowels

Kwak’wala has a rich inventory of surface vowels – at least [i], [ɪ], [e], [ɛ], [æ], [ə], [a], [o], [ɔ], and [u] – but only some of these are phonemic. The phonemicization that underlies the modern orthographies assumes /i/, /e/, /a/, /ə/, /o/, and /u/, and it may be possible to reduce this further to just /a/, /i/, and /u/.

The complexity of alternations that we encounter in Kwak’wala stems, in which the surface vowels can differ dramatically depending on syllabification, necessitates that we posit underlying forms that, in some case, differ greatly from their apparent realizations. Moreover, we find that the mutation of consonants sometimes results in apparent vowels, and the mutation of apparent vowels results in consonants. To get the correct surface forms for a morpheme, across all the stems it occurs in, it is often necessary to treat schwas as epenthetic, and to treat [u] and [i] as underlying /w/ and /y/ respectively. In many cases, the underlying forms that give us the most consistent forms of morphemes end up having no vowels at all save /a/, and in §A.5.3 I note some reasons why /a/ itself might be better treated as a consonant.

In this work, I provide underlying forms in which the vowels are mostly limited to /a/, /i/, and /u/, and account for many surface vowels as being epenthetic, underlyingly consonants (e.g. /CyC/ → [CiC]), vowel+consonant sequences (e.g. /CayC/ → [CeC]), or vowel+vowel sequences (e.g. /ai/ → [əʔe ~ eʔe]). I should clarify, however, that these underlying forms should not necessarily be taken to represent a thorough phonemicization of modern spoken Kwak’wala. For the most part, I choose these forms because they allow the most uniform presentation of the underlying forms of the morphemes seen in this data.¹¹

¹⁰That this is not the true Kwak’wala schwa is also seen in its realization – something like [ɛ:] rather than the shorter and often fronter [ɛ] or [ɪ] we usually get before an /s/.

¹¹I sometimes, however, put vowels other than {a, i, u} in underlying form when the derivation is unclear, when they have multiple possible derivations for which I do not have evidence to decide, or when other forms of the morpheme suggests that a speaker has reanalyzed a derived vowel as underlying (§A.5.1).

The underlying forms proposed here for Kwak’wala stems often resemble those proposed by Lincoln and Rath (1986) for the related Northern Wakashan language Haisla. The main difference is that I retain /a/ as distinct from /h/, and concur with Boas et al. (1947, p. 212) that at least some instances of /i/ and /u/ seem to be underlying: “Comparison with Bella Bella indicates that in many cases the consonantic forms are the original ones, but it is unlikely that every i or u goes back to a consonantic y or w”.

A.5.1 Fossilization of vowel patterns

Some of the alternations that we see in Boas et al. (1947) seem to have since broken down, and at least some speakers seem to have reanalyzed some historically-derived forms as being underlying.

For example, if we look at the historical derivations and inflections of the stem for “to leave” (798a), the resulting forms give us several reasons to believe this root actually ends in a *w*, and lacks a full vowel, as it does in (798b). For example, when we add a suffix that lengthens stems without full vowels, like *-_eap̓* in (798c), an [a] is added to the stem, just like it would in a stem with no full vowel and a final /m/, /n/, or /l/. Furthermore, the suffix *-_{ew}as* only lengthens (in the sense of “lengthening” used in §2.2.2 and §A.7.3) stems that end in resonants, and we see in (798d) that the stem is indeed lengthened. This gives us plenty of reason to believe that the stem is something like *bw* or *bəw* (depending on whether we take the schwa to be underlying or epenthetic).

(798) a. bo
 bw=a
 leave=A
 “to leave”

b. bəwən
 bw=n
 leave=l
 “I leave”

(Boas et al., 1947, p. 212)

c. bawap̓
 bw-_eap̓
 leave-RECIP
 “leave one another”

- d. ba^hwas
 bw=_{ew}as
 leave-PLACE
 “place of leaving”, “time of leaving” (Boas et al., 1947, pp. 318-319)

However, at least some speakers seem to have reanalyzed this stem as *bo*, so that, for example, the third-person distal form is *bówi* rather than *bəwí*.

- (799) a. bowi
 bo=i
 leave=3_{DIST}
 “he/she/it leaves”

I have noticed this for several other such stems; historical *cw-* (“to give”), *cy-* (“to draw water”), *dulw-* (“to win”) are now treated, at least inflectionally, as if their citation forms (*co-*, *ce-*, *dulo-*) were their underlying forms.

A.5.2 Schwa

There are various reasons to posit that schwas – that is, the “short” or “central” vowels – are not present in underlying forms, but are epenthesized for phonotactic reasons (Grubb, 1977, p. 236–241)¹², so that a form like [səka] (“to spear”) would have the underlying form /ska/.

- (800) a. səka
 ska
 spear
 “to spear” (Boas et al. (1947, p. 208), Grubb (1977, p. 237))

This form, *ska*, is how this word appears in closely related languages like Heiltsuk (Grubb, 1977, p. 237), so it is at least historically plausible that schwa is derived from an underlyingly schwa-less form, and serves to fulfill syllable structure constraints that Kwak’wala’s relatives do not share. We can also observe various ways that schwa appears and disappears when other processes disrupt syllable structure.

For example, if we consider a word like *nəge* (“mountain”), it could be that this [ə] is underlying, or it could be there to prevent an illegal initial cluster *[ng-]. When this form is

¹²It should be noted here that Grubb’s only evidence against the epenthesis of schwas, the proposed minimal pair between *ʔəlkʷa* (“blood”) and *ləkʷa* (“to faint”), depends on treating the initial glottal stop of *ʔəlkʷa* as epenthetic, which I do not.

reduplicated and the cluster is no longer initial, however, we can observe that the schwa no longer appears here. Rather, it appears before the *n*.

- (801) a. *nəge*
 nge
 mountain
 “mountain”
- b. *nəʔənge*
 na-nge
 REDUP-mountain
 “mountains”

We might be tempted to explain the above as *nə* to *ən* metathesis, but we can see various other phenomena in which metathesis would not be a plausible explanation.

Consider, for example, the “participle”-forming suffix *-_wk^w* (§B.3.4.4).¹³ It is usually realized as [*-_wək^w*]:

- (802) a. *kadək^w*
 kat-_wk^w
 write-PART
 “letter, something written”
- b. *subək^w*
 sup-_wk^w
 chop-PART
 “chopped with an axe”

However, when attached to a stem ending in *s*, like *k^wəns-* (“to bake bread”) or *məns-* (“to measure”), the *s* weakens to *y* (§A.7.1.2), which then fills the syllabic nucleus as [i]. The result is not **k^wənyək^w* or **mənyək^w*, which we would expect if the suffix were indeed *-_wək^w*.

¹³The participle suffix, the “stimulus” passive suffix *-_wʔ*, and the “on the ground” locational suffix *-_hs* are extremely useful phonological diagnostics, as they consist of only a consonant but mutate the previous segment. Since mutation can result in +R segments like *y* and *w*, the resulting alternations can be quite complex; as Boas notes of *-_wk^w*, “Although the combination of this suffix with the stem follows the general phonetic rules, the forms are somewhat complicated on account of the character of the suffix which consists of a single consonant” (Boas et al., 1947, p. 259).

(803) a. k^wəník^w (*k^wənyək^w)
 k^wns-_wk^w
 bake.bread-PART
 “bread”

b. ṃəník^w (*ṃənyək^w)
 ṃns-_wk^w
 measure-PART
 “something measured”

(FirstVoices, 2009)

This is not an idiosyncratic property of -_wk^w, but a general property of -_wC suffixes.

(804) dənídzu (*ḍənyəḍẓu)
 dns-_wḍ^{ẓw}
 red.cedar.bark-flat
 “flat piece of red cedar bark”

(Boas et al., 1947, p. 212)

A similar example occurs when *x* mutates to *n* (§A.7.1.2). When -_wk^w or -_wʔ is added to roots ending in *x*, the schwa is seen before the resulting *n* – within the root, not after it, suggesting that the schwa is not actually part of the suffix.

(805) a. máyaʔənʔ (*máyaʔnəʔ)
 máyaʔx-_wʔ
 respect-STIM
 “respected”

(Boas et al., 1947)

b. p̣ənk^w (*p̣ənək^w)
 p̣x-_wk^w
 heat-PART
 “heated”

In addition, there is a phonological rule by which rounded dorsals are realized as unrounded when followed by a rounded vowel (§A.6.2).¹⁴ We find the same occurring when a rounded dorsal precedes another rounded dorsal with only a schwa intervening:

¹⁴Recall that in Kwak’wala that unrounded velars are heavily palatalized, and therefore that this pattern is, at least for the velars, easily audible.

- (806) a. nəǰək^w
 nq^w-_wk^w
 cover-PART
 “eclipse” (lit: “covered”) (FirstVoices, 2009)
- b. ʔəǰək^w
 ʔq^w-_wk^w
 red-PART
 “red cedar bark”
- c. dugək^w
 duk^w-_wk^w
 stripe-PART
 “striped cloth” (Boas et al., 1947)
- d. ʔəlgək^w
 ʔlk^w-_wk^w
 blood-PART
 “clams taken out of shell, sprinkled with blood” (Boas et al., 1947, p. 359)

This suggests they are phonologically adjacent.¹⁵

As noted above, although most instances of schwa are predictable, there are some that would not, at least according to my understanding of Kwak’wala phonotactics, be absolutely necessary, and we may have to treat them as underlying.

Consider, for example, the stem in (807).¹⁶

- (807) ʔəwəls
 ʔwls?
 elk
 “elk”

If the underlying form of (807) were just ʔwls, it should, by the rules above, surface as *ʔuls or *ʔuls. It could be that there are complex rules regarding the vocalic expression of *w* before glottalized resonants (this is something that seems to differ between dialects, and in the Gut’sala dialect this is, indeed, realized as [u] in ʔuls), or perhaps speakers have reanalyzed

¹⁵We could also say that rounding travels through the schwa, or that this is a potentially long-distance dissimilation regarding which the schwa is transparent, but given the preceding evidence that the schwa seen in *wk^w* is not underlying, the simplest explanation is that the affected segments are indeed adjacent.

¹⁶This looks like a derived stem, with the suffix *-hs* (“on the ground, outdoors”), but I do not know what the root is.

this as having *lʔs* (it is hard to tell where the glottalization is in this word), but given the rules above, the form in (807) is inadequately predicted from a schwa-less underlying form.

In addition, there is an alternation in which /wʔt/ is realized as [wʔt] after dorsals and fricatives (§A.6.5). Although this is a predictable alternation, it is also entirely unclear why a schwa would be necessary here; it would not be predicted by the assumptions about syllabification in §A.3.2.

Finally, there are also regularizations of historical reduplications that suggest that some speakers have reanalyzed some schwas as underlying. For example, the *Ca*-plural given above for “mountains” has been, for some speakers, regularized as a *Cỵ*-plural, and in this form, *nəge* appears with a schwa that would not necessarily be expected, since a right-to-left syllabification of /nỵnge/ should give *[nəỵnge] instead.

- (808) a. nəʔənge
 na-nge
 REDUP-mountain
 “mountains”
- b. niʔnəgé (*nəỵənge)
 nỵ-nge
 REDUP-mountain
 “mountains”

A.5.3 The realization of /a/

The realization of /a/ in Kwak’wala is complicated – while it is often [a], a variety of phonological complications (including ones where it seems that the phonology is treating /a/ as a consonantal onset) suggest that /a/, or at least some instances of it, is actually a glottal consonant in the plain resonant series: a counterpart of the glottal stop.¹⁷ In other words, the resonant series of Kwak’wala may actually be this:

(809)	Plain	m	n	l	y	w	a
	Glottalized	m̥	n̥	l̥	y̥	w̥	ʔ

¹⁷This is not dissimilar to the way in which Lincoln and Rath (1986) derive Haisla [a] from underlying /h/, because the two are in complementary distribution, with [a] never occurring word-initially and [h] only occurring word-initially. I do not treat [a] as /h/, because when we observe it in other onsets it is realized as [ʔ] rather than [h].

- c. $duq^wəlaʔəmǎʔe$
 $dwq^w-la=ʔm=ǎa=i$
 see-ONGOING=VER=ADD.FOC=3DIST
 “He/she/it [absent] saw it too.”

This schwa is often realized as an echo vowel, so that (812b) is pronounced with $[=ǎoʔoǎ]$ and (812c) is pronounced with $[=ǎeʔe]$, but the echo vowel is always short and unstressed. This is an alternation we see in various places in the language – for example, in the realization of yes/no questions (§B.7.1), when subjects follow complex copular complements (§4.2.6), and in *Ca*-reduplication.

That the resulting vowel is a schwa rather than a full vowel is made clear when we consider its effect on stress. *Ca*-reduplication, when it occurs before something that is syllabified as an onset, is realized with $[a]$, and receives stress (§A.7.2). On the other hand, when *Ca*-reduplication occurs before a +R nucleus, it is realized with $[əʔ]$ (or, again, a short echo vowel) and does not receive stress (813).¹⁹

- (813) a. $nəʔənge$
 $na-nge$
 REDUP-mountain
 “mountains”
- b. $həʔéləm$
 $ha-íl-wm$
 REDUP-correct-DIMIN
 “health”

Various morphemes in Kwak’wala seem to consist solely of $/a/$, and surface mostly as schwas and echo vowels, like the question enclitic that appears before the subject enclitics of yes/no questions (§B.4.3.4). These are not just composite subject enclitics $=eʔe$, $=oʔoǎ$, etc. because we can observe other morphemes intervening between them (814d).

¹⁹This can also happen before roots that begin in $ʔa$, like $ʔabəls$ (“apple”).

In general, the reduplicated forms of roots that begin in resonants (plain or glottalized), h , and $ʔ$ are somewhat unpredictable. I do not mean to portray this process as more regular than it is, only to observe that one of the more common apparent irregularities, the realization of $/Ca/$ as $[Cəʔ]$ and its failure to take stress, does not need to be treated as an irregularity at all; this is an alternation that can be observed elsewhere in the language as well.

- (814) a. $\acute{w}e\acute{m}as$
 $\acute{w}e\acute{l}=?m=a=s$
 $can=VER=QUES=2$
 “can you... ?”
- b. $\acute{q}a\acute{m}o\acute{?}o\acute{x}$
 $\acute{q}a=?m=a=u\acute{x}$
 $find=VER=QUES=3MED$
 “did he/she/it [present] find... ?”
- c. $\acute{w}e\acute{m}e\acute{?}e$
 $\acute{w}e\acute{l}=?m=a=i$
 $can=VER=QUES=3DIST$
 “can he/she/it [absent]... ?”
- d. $l\acute{a}m\acute{e}\acute{?}e\lambda u\acute{x}$ $n\acute{a}qela\acute{?}a$
 $l=?m=a=e\lambda=u\acute{x}$ $nqela=a$
 $now=VER=QUES=oh=3MED$ $noon=QUES$
 “It’s noon already?”

It is also worth noting that the ordinary realization of schwa before a glottal stop (when there are not complicating factors like a preceding palatalized velar or a following high vowel) is, at least to my ear, a sound lower than a normal schwa but shorter than a full [a].²⁰ So it would be entirely possible to say that what sounds like [a] is *always* just a schwa before a glottal resonant.²¹

We can also see evidence for this from mutation. A few roots and suffixes end in /a/ – that is, they do not just end in *a*, as most stems will, in particular predicative contexts (§B.4.4.3), but actually seem to have underlying /a/ as their final segment. When such morphemes are mutated, they appear with the [əʔ] realization of /a/.

²⁰It is rather difficult to tell this sound from /a/; Grubb (1977) and FirstVoices (2009) frequently transcribe low schwas as <a> (§A.4.3.2), as does Boas (1905; 1947). This is not an incorrect transcription – it hews closer to the underlying form and thus makes clearer the nature of the morpheme itself – although it can lead to problems, since one would then expect a different stress pattern based on the transcription. Grubb (1977) occasionally mis-assigns stress for this reason, and the FirstVoices (2009) word list does so often.

²¹Given this, and the ability to derive many instances of [i] and [u] from their corresponding resonants /y/ and /w/, it is tempting to try to phonemicize Kwak’wala without any reference to vowels at all, as Lincoln and Rath (1986) do for Haisla. However, aside from the other problems mentioned in these sections, if our only sources of mid vowels were /a/, /y/, and /w/, then it is unclear how we distinguish cases in which /ay/ is realized as [əʔe] (as it would in this section) and cases in which /ay/ would be realized as [e] (as it would in §A.5.6).

- (815) ləʔstəʔaci
 l-ʔsta-_was-_hi
 go-in.water-PLACE-NMZ
 “bathtub”

There is another surprising way that /a/ is treated as if it were a plain resonant, which we can see when we consider the participial suffix $-_w k^w$ (§B.3.4.4). $-_w k^w$ gets a special realization $-_w a k^w$ after plain resonants.

- (816) a. ǰəlǰəlsəmək^w
 ǰl-ǰls-(ǰ)m-_wk^w
 REDUP-paint-face-PART
 “painted face” (FirstVoices, 2009)

- b. kəʔabəwək^w
 k-_wabw-_wk^w
 put.container-below-PART
 “baked fish, anything baked” (FirstVoices, 2009)

Since $-_w k^w$ also gets this realization after /a/, this gives us another reason to consider /a/ as a kind of plain resonant.

- (817) a. λiχsʔəʔak^w
 λiχs-(k)ʔa-_wk^w
 advise-sound-PART
 “educated, someone who has been advised or taught” (FirstVoices, 2009)

- b. kaxλəʔak^w
 ka-xλa-_wk^w
 put.container-on.fire-PART
 “anything fried” (FirstVoices, 2009)

/a/ also seems to be involved in the derivation of several front low vowels. Boas (1900, p. 710) suggests that [ɛ] (which he transcribes as ä) can derive from a sequence of low vowels: “aa is often contracted to ä, for instance $\bar{o}^e ma-a$, *that chieftainness*, becomes $\bar{o}^e mä$ ”.

- (818) ʔumɛ
 ʔum^aa
 chieftainness=INVIS
 “that chieftainness”

It may be possible that other vowels of the same and similar quality likewise derive from specific sequences of low vowels.²²

When the sequence [an] would occur before a syllable boundary – that is, when a leftward syllabification algorithm would have already syllabified /n/ as the nucleus before getting to /a/, the realization of this /a/ varies; sometimes it is something like [æ] or [æ²] (819), other times it is something like [eyən] or [eʔən] (820), other times it is what we might expect, [əʔən] (821).

(819) wɛlɪnæ²n...
 wɛlɪ=ʔm=a=n
 can=VER=QUES=1
 “Can I... ?”

(820) kɪʔseyən wɛl...
 kɪʔs=a=n wɛl
 not=QUES=1 can
 “Can’t I...? Aren’t I allowed to...?”

(821) wɛlʔəmɤəʔən
 wɛlɪ=ʔm=ɤa=n
 can=VER=ADD.FOC=1
 “I can, too.”

Put another way, we might predict that /an/ (when it does not precede a vowel) would be realized as [əʔən], similar to the way that /ai/ is realized as [əʔe] and /au/ is realized as [əʔo]. However, while it is sometimes realized this way, it also has some variant pronunciations, most notably a low front vowel [æ] or [æ²].

A.5.4 [i] and [u] from /w/ and /y/

At least some instances of [i] and [u] seem to have their origins as /y/ and /w/ respectively.

One compelling reason to consider at least some instances of /i/ and /u/ to be of consonantal origin comes from mutation. One of the weakened realizations of /s/ is [y], and the weakened

²²For example, if one listens to many instances of ʔəɤʔeɤsd (“want”), there is a range of mobility and variability in the pronunciation of this vowel that suggests that something more complicated is going on with the [ɛ]; there is sometimes an extra half-syllable in there – something like [ʔəɤʔəʔeɤsd]. There is also something unusual happening in the vowel in *he*, the third person distal copula (Chapter 4). This vowel is somewhat variable and is transcribed in a variety of ways (§4.2.4), but it is often similar to the vowel in ʔəɤʔeɤsd, and likewise seems to sometimes have extra “motion” and perhaps a half-syllable length to it, as well as some kind of glottal component.

realization of /x^w/ and /x̣^w/ is [w] (A.7.1.2). However, when these occur in a syllable nucleus – as they do when the following weakening suffix begins in a -R consonant – they are realized as [i] and [u].

(822) a. $\acute{c}\acute{a}l\acute{i}dzu$
 $\acute{c}l\acute{s}\text{-}_w dzu$
 slice.fish-surface
 “board on which fish are sliced” (Boas et al., 1947, p. 212)

b. $k^w\acute{a}n\acute{i}k^w$
 $k^w n\acute{s}\text{-}_w k^w$
 bake.bread-PART
 “bread”

c. $\acute{q}\acute{i}k^w$
 $\acute{q}\acute{s}\text{-}_w k^w$
 eat.meat-PART
 meat eaten (cf. $\acute{q}\acute{a}d^z\acute{a}k^w$, same meaning) (Boas et al., 1947, p. 359)

d. $\acute{p}\acute{i}k^w$
 $\acute{p}\acute{s}\text{-}_w k^w$
 give.potlatch-PART
 “a potlatch given” (Boas et al., 1947, p. 212)

(823) a. $m\acute{u}l$
 $m\acute{x}^w\text{-}_w l$
 desire-STIM
 “desired”

b. $\acute{c}\acute{u}k^w$
 $\acute{c}\acute{x}^w\text{-}_w k^w$
 pierce-PART
 “pierced” (Boas et al., 1947, p. 359)

c. $d^z\acute{a}l\acute{u}n\acute{a}k^w\acute{a}l\acute{a}$
 $d^z l\acute{x}^w\text{-}_w n\acute{a}k^w\text{-}l\acute{a}$
 run-gradual-ONGOING
 “run around”

- d. $\acute{t}\acute{o}l\acute{u}k^w$
 $\acute{t}l\acute{x}^w\text{-}_w k^w$
 pound-PART
 “pounded”

(Boas et al., 1947, p. 359)

We can also see this alternation in the other direction, where an apparent [i] or [u] in a stem is realized as [y] or [w] when the stem is mutated, because it is followed by a consonant that, upon weakening, becomes +R. For example, in the root for “feel/touch”, we find in most forms an [i] ([$\acute{p}i\acute{x}^w\text{-}$]) (824a). However, when the suffix $\text{-}_w t$ follows, the x^w becomes w , and thus a potential nucleus. In such a case, [i] no longer surfaces; instead, we find a [y] as the onset of the final syllable (824b). If [i] had been underlying, we would expect something like $*\acute{p}i\acute{w}\acute{o}t$ or perhaps $*\acute{p}i\acute{y}\acute{u}t$, with initial stress.

- (824) a. $\acute{p}i\acute{x}^w\text{-}\acute{a}\acute{\lambda}\acute{o}t$
 $\acute{p}y\acute{x}^w\text{-}\acute{a}\acute{\lambda}\text{-}_w t$
 feel-achieve-STIM
 “felt”

- b. $\acute{p}\acute{o}y\acute{u}t$
 $\acute{p}y\acute{x}^w\text{-}_w t$
 feel-STIM
 “felt”

Likewise, in the roots for “to twill-weave” and “eat during travel”, we find in most forms an [u] nucleus ([$s\acute{u}t\text{-}$], [$g\acute{u}t\text{-}$]), but when the suffix $\text{-}_w k^w$ follows, the t becomes l , itself a potential nucleus. Again, in such a case, [u] no longer surfaces, and instead we find a [w] as the onset of the final syllable. If this [u] had been underlying, we would expect something like $C\acute{u}l\acute{o}k^w$ or $C\acute{u}l\acute{k}^w$ or perhaps $C\acute{u}w\acute{o}l\acute{k}^w$.

- (825) a. $s\acute{a}w\acute{o}l\acute{k}^w$ ($*s\acute{u}l\acute{o}k^w$, $*s\acute{u}l\acute{k}^w$, $*s\acute{u}w\acute{o}l\acute{k}^w$)
 $s\acute{w}l\text{-}_w k^w$
 twill.weave-PART
 “twill weaving”

(Boas et al., 1947, p. 359)

- b. $g\acute{a}w\acute{o}l\acute{k}^w$ ($*g\acute{u}l\acute{o}k^w$, $*g\acute{u}l\acute{k}^w$, $*g\acute{u}w\acute{o}l\acute{k}^w$)
 $g\acute{w}l\text{-}_w k^w$
 eat.during.journey?-PART
 “travel provisions” (cf. *gulas*, “place for lunch”)

(Boas et al., 1947, p. 319)

The same occurs in the root [cus-] (“crush”), in which we find an [u] nucleus and an /s/ coda, but when the suffix $-_w k^w$ follows, the *s* becomes *y*, itself a potential nucleus.

- (826) $c\acute{a}w\acute{i}k^w$ (* $c\acute{o}y\acute{a}k^w$, * $c\acute{o}w\acute{i}k^w$)
 $cws\text{-}_w k^w$
 crush-PART
 “crushed” (Boas et al., 1947, p. 359)

We can also make an argument from stress realization. There is, for some roots, a stress alternation caused by mutation (§A.7.1) that would be mysterious if these stems had underlying vowels, but is unproblematic if these stems have, instead, underlying /y/ and /w/. In §A.4.1, we observed that plain resonant and glottalized resonants are treated differently by the stress-assignment algorithm: the former are candidates for stress whereas the latter are not (unless there are no other possible candidates in the word). Since mutation turns plain resonants into glottalized resonants, observing that mutation changes stressable vowels into un-stressable vowels is good reason to think that these vowels are really plain resonants underlyingly.

- (827) a. $di\text{?}\acute{x}st\acute{a}nu$
 $dy\text{-}_h \acute{x}st\text{-}_w anu$
 wipe-end-INSTR
 “toilet paper” (FirstVoices, 2009)
- b. $gi\text{?}s\text{?}\acute{a}we\text{?}$
 $gy\text{-}_h s\text{-}\text{?}aw\text{-}a\acute{y}$
 put-on.ground-leave.behind-NMZ
 “left on the ground” (Boas et al., 1947, p. 313)

A.5.5 [i?] and [u?] from /y/ and /w/

As seen in (827) above, some instances of [i?] and [u?] come from /y/ and /w/ in a syllable nucleus.

Two of the most frequent and noticeable of these alternations involve the word for “and, with”, with and without nominative enclitics (828), and a similarly frequent alternation with the passive suffix (829).²³

²³The distinction in (829) is not always reliably transcribed; the difference between $-s\acute{a}w\acute{i}$ and $-su\text{?}i$ is subtle, especially as this schwa is something like [ʊ]. If the transcriber expects $-su\text{?}i$ – that is, if they expect words to be made transparently out of their parts as seen in relative isolation – it is easy to hear $-s\acute{a}w\acute{i}$ as $-su\text{?}i$. $\lambda\acute{a}w\acute{i}$ is more reliably transcribed, since the clear difference in stress makes the schwa apparent.

- (828) a. $\lambda\acute{u}ʔ$
 $\lambda\acute{w}$
with
“and, with”
- b. $\lambda\acute{ə}\acute{w}í$
 $\lambda\acute{w}=i$
with=3_{DIST}
“and/with him/her/it”

- (829) a. $h\acute{ə}m\acute{x}ʔis\acute{u}ʔ$
 $hm-xʔid-s\acute{w}$
eat-CHANGE-PASS
“was eaten”
- b. $h\acute{ə}m\acute{x}ʔis\acute{ə}\acute{w}i$
 $hm-xʔid-s\acute{w}=i$
eat-CHANGE-PASS
“he/she/it was eaten”

We can also observe that some instances of [iʔ] and [uʔ] behave anomalously during stress assignment (§A.4.3.1). If the first syllables in (830) contained /i/ and /u/, then they should have initial stress; that they do not is reason to consider that they might, underlyingly, have only -R material (which includes glottalized resonants like w') in those syllables.

- (830) a. $g\acute{u}ʔd\acute{a}n$ (* $g\acute{u}ʔdan$)
 $g\acute{w}dan$
horse
“horse”
- b. $kuʔd^z\acute{a}ci$ (* $k\acute{u}ʔd^z\acute{a}ci$)
 $k\acute{w}s-was-hi$
potato-PLACE-NMZ
“potato patch”
- c. $g\acute{u}ʔx^wʔid$ (* $g\acute{u}ʔx^wʔid$)
 $g\acute{w}-xʔid$
help-CHANGE
“to help” (cf. $g\acute{ə}w\acute{a}la$, “helping”)

- d. **giʔǎ́** (*gíʔǎ́)
gý-ǎ́
 put-down
 “to put down”

We can also observe the difference between [iʔ] and [i] when we consider the regular [Ciʔ-] (that is, /Cý/) plural reduplication that most words receive to the irregular [Ci-] (either /Ci/ or /Cy/) reduplication that *bəgʷanəm* (“man”) and a few other frequent nouns receive (§A.7.2.1). In the former, the stress falls on a subsequent syllable, in the latter, the stress falls on the reduplicant.

- (831) a. **biʔbúsi**
bý-busi
 REDUP-cat
 “cats”
- b. **bí**bəgʷanəm
bi-bkʷ-wanəm
 REDUP-man-person
 “men”

The stress difference can also be seen in §A.5.4, where a /y/ or /w/ that would be the nucleus of a stressed syllable is not stressed when mutated – that is, when its form after mutation is [ý] or [w̃] and its surface form is [iʔ] or [uʔ].

All of the above forms would be violations of the stress-assignment rules if they had underlying vowels, but are what we would expect for glottalized resonants, which will not take stress if a better candidate exists.

Note, however, that not all instances of [iʔ] come from /ý/; some do seem to come from /i/ (or maybe /y/) followed by /ʔ/. The stress patterns in (832) suggest underlying /iʔ/ or /yʔ/ rather than /ý/.

- (832) a. ʔəniʔǎ́nəm (*ʔəniʔǎ́nəm)
 ʔniʔq-wanəm
 gather.wood-obtained
 “firewood obtained”

- b. $k\acute{i}\eta k^{w}i\lambda a$ ($*k\acute{i}\eta k^{w}i\lambda a$)
 $k\acute{i}\eta k^{w}-(g)i-\lambda a$
 totem.pole-do-ONGOING
 “to carve a totem pole” (FirstVoices, 2009)
- c. $di\eta stud$ ($*di\eta st\acute{u}d$)
 $dy-\eta stw-d$
 wipe-eye-CHANGE
 “to wipe one’s eye” (FirstVoices, 2009)

The contrast between (827a) and (832c) is particularly instructive: when the root *dy* is hardened, we find unstressed *i?*, whereas when it simply precedes a glottal stop we find stressed *i?*.

A.5.6 [o] and [e] from /aw/ and /ay/

We can see an [e] ~ [ay] alternation in the forms of the root *gay-* (“be from, originate”); when it precedes +R material like /w/ ([u] in 833a), we find [ay], but when it precedes -R material, we find [e].

- (833) a. $gayu\lambda$
 $gay-w\lambda$
 be.from-obtain
 “get something from”, “be from”
- b. $ge\check{x}\eta id\eta as$
 $gay-x\eta id-was$
 be.from-CHANGE-PLACE
 “where you came from or started from” (FirstVoices, 2009)

This alternation can explain various otherwise unusual patterns involving the Kwak’wala mid vowels.

For example, we can observe an alternation due to mutation: when stems ending in /as/ and /a \check{x}^w / weaken, they weaken to [ay] and [aw] respectively (§A.7.1.2). When these sequences precede -R consonants, however, we find the realizations [e] and [o], respectively.

- (834) a. $x^w ek^w$
 $x^w as-w k^w$
excite-PART
“excited” (Boas et al., 1947, p. 359)
- b. $g^w et$
 $g^w as-w t$
chap-STIM
“chapped” (Boas et al., 1947, p. 212)
- c. $qeñak^w əla$
 $qas-w ñak^w-la$
walk-gradual-ONGOING
“walking along” (FirstVoices, 2009)
- d. $\lambda o d^z u d$
 $\lambda a \check{x}^w-w dzu-d$
stand-surface-CHANGE
“person stands on flat surface” (Boas et al., 1947, p. 212)

It is also worth observing that /i/ and /u/ are lowered towards [e] and [o] in the presence of uvulars, but in many words the resulting sounds are still distinct from the [e] and [o] discussed here. For example, the [o] in $q'o\lambda a$ (“know”) is noticeably different than the lowered realization of /u/ in the second syllable of $q'aq'u\lambda a$ (“learn”). The difference is more systematic in the back vowels than the front vowels; a uvular-lowered /i/ more often sounds like [e].

We can also see the $ay \sim e$ and $aw \sim o$ alternations during lengthening. As we will see in §A.7.3, some suffixes like $-_{eh}la$ (“to order to X”) and $-_{eh}m$ (“true, genuine”) take stems with schwas – that is, stems with syllables without underlying vowels – and insert an [a]. However, in some words we can see them take an apparent /i/ and realize it as [e] (835a), or an apparent /u/ and realize it as [o] (835b, 835c).

- (835) a. $sew əla$ (< $sayw əla$)
 $sy \check{x}^w-_{eh} la$
to.paddle-order
“to order to paddle” (cf. *siwayu* “paddle”) (Boas et al., 1947, p. 307)

- b. $\acute{c}ol\acute{e}m$ ($< \acute{c}awl\acute{e}m$)
 $\acute{c}wl_{-eh}m$
 black-genuine
 “something really black” (cf. *ćula*, “black”) (FirstVoices, 2009)
- c. $doq^w\acute{e}la$ ($< dawq^w\acute{e}la$)
 $dwq^w_{-eh}la$
 see-order
 “to order to see” (cf. *duq^w\acute{e}la*, “see”) (Boas et al., 1947, p. 307)

Rather than have to add an additional condition to the lengthening rule, this can be handled by positing that these stems contain only underlying /y/ and /w/. As stems without underlying vowels (*syx̣^w-*, *ćwl-*, *dwq^w-*), they are eligible for the ordinary lengthening rule in which vowel-less syllables receive an [a] (becoming *sayx̣^w-*, *ćawl-*, and *dawq^w-*), and finally surfacing with [e] and [o].

We can also see this when the lengthening suffix *-eylý* (“back and forth, here and there, around”) attaches to a one-consonant root. One consonant roots (*C-*) lengthen to *Ca-*, but here this /a/ and /y/ coalesce to [e].

- (836) a. $\acute{c}el\acute{e}la$ ($< \acute{c}ayl\acute{e}la$)
 $\acute{c}_{-e}ylý-ala$
 tide-here.and.there-ONGOING
 “tide flows to and fro” (Boas et al., 1947, p. 328)
- b. $del\acute{e}la$ ($< dayl\acute{e}la$)
 $d_{-e}ylý-ala$
 carry-here.and.there-ONGOING
 “to carry about” (Boas et al., 1947, p. 328)

l- (“go”) provides an interesting illustration of the relationship between surface [i] and [e]. The suffix *-eylý* is irregularly lengthening (§A.7.3) – sometimes it lengthens the stem, and sometimes it does not – and sometimes both forms exist for the same stem. This variability, along with the analysis of [e] as /ay/ and [i] as /y/, would explain the existence of both *lił\acute{e}la* and *leł\acute{e}la* for “go back and forth”: the first is the realization of non-lengthened /lylýala/ and the second is the realization of lengthened /laylýala/.

- (837) a. *liɛ́la* (< *lyíyala*)
l-yíy-ala
 go-here.and.there-ONGOING
 “go back and forth”
- b. *leɛ́la* (< *layíyala*)
l-eyíy-ala
 go-here.and.there-ONGOING
 “go back and forth”

Another, more indirect form of evidence is the behavior of the stems *loɔ́* and *qoɔ́* during reduplication. As seen in §A.7.2, some reduplication patterns realize the stem vowel in the reduplicant rather than the base. When *loɔ́* and *qoɔ́* undergo this reduplication, the reduplicant gets the stem vowel [a] and the base gets an [u], suggesting that the [o] seen in the normal stems is really /aw/.²⁴

- (838) a. *laluɔ́a* (**loləɔ́a*)
la-l(a)wɔ́-ha
 REDUP-get-try
 “try to get”
- b. *qaquɔ́a* (**qoqəɔ́a*)
qa-q(a)wɔ́-ha
 REDUP-know-try
 “learn”

If the [o] seen in the stems were really a single vowel, we would expect instead something like the forms **loləɔ́a* and **qoqəɔ́a*.

A further form of reduplicative evidence comes from this same reduplication process affecting roots beginning in *ya-* and *wa-*. When the reduplicant “steals” the *a* of the root – here indicated in the underlying form in parentheses – it leaves *ya-y* and *wa-w*, and these are realized as [ye] and [wo] respectively.

²⁴These stems are probably multimorphemic in any case, consisting of *la* (“go”) and *qa* (“find”) plus the suffix *-wɔ́* (“obtain”). *-wɔ́* itself may be a combination of *-w* (“outwards”) and *-ɔ́* (“obtain”), since various roots about obtaining (e.g. *kiɔ́*- “fish with a net”, *hənɔ́*- “hunt”) end in *-ɔ́* as well.

- (839) a. **yelaq̣iqəla**
ya-y(a)laq_{-h}iq-la
 REDUP-proud-in.self-ONGOING
 “feel proud” (Boas et al., 1947, p. 327)
- b. **yeq̣^wiqəla**
ya-y(a)q^w-_hiq-la
 REDUP-give.at.potlach-in.self-ONGOING
 “thinking of giving presents” (Boas et al., 1947, p. 327)
- c. **wotəla**
wa-w(a)t-la
 REDUP-lead.by.hand-ONGOING
 “thinking of leading” (Boas et al., 1947, p. 327)

A.5.7 [oʔ] and [eʔ] from /a^w/ and /a^y/

Just as /y/ → [i] and /w/ → [u] have glottalized counterparts /ỵ/ → [iʔ] and /ẉ/ → [uʔ], the sequences /ay/ → [e] and /aw/ → [o] have glottalized counterparts: /a^y/ → [eʔ] and /a^w/ → [oʔ].

We can observe this, for example, in the suffix *-a^y* (§B.3.4.12).

- (840) a. **həməʔ**
hṃ-a^y
 eat-NMZ
 “food”
- b. **kutəluḥ** **həmə^yaḥs**
kutl=uḥ **hṃ-a^y=a=q=s**
 salmon=3_{MED} eat-NMZ=POSS=VIS=3_{POSS}
 “A salmon is what she is eating.” (Lit: “Her food is salmon.”)
- (841) a. **ʔəməʔ**
ʔm-a^y
 small-NMZ
 “small”

- b. ʔəmaɣ̣aǵaweʔ
 ʔm-aɣ̣-aǵawaỵ
 small-NMZ-more
 “smaller”

We can see the /aʷ/ to [oʔ] realization through mutation, when a root ending in a \check{x}^w receives a hardening suffix: instead of the expected [aʷ], we find [oʔ].

- (842) a. $\lambda oʔs$
 $\lambda a\check{x}^w-hs$
 stand-on.ground
 “standing on the ground”, also “tree”²⁵

- b. $k^w oʔs$
 $k^w a\check{x}^w-hs$
 hole-on.ground
 “hole in ground”

(Boas et al., 1947, p. 212)

- c. $\check{g} oʔs$
 $\check{g} a\check{x}^w-hs$
 hang-outside
 “something hanging outside”

(FirstVoices, 2009)

The most straightforward explanation of this is that [oʔ] is simply the realization of /aʷ/, produced from the hardening of /ax \check{x}^w /.

We can see that the *oʔ* is made up of two separate sounds if we consider the reduplicative plurals of the stems in (842). Like the reduplications in §A.5.6, which “split” *o* into *a* and *u*, this reduplication splits *oʔ* into *a* and *uʔ*.

- (843) a. $\lambda a\check{x}\lambda uʔs$
 $\lambda a\check{x}-\lambda(a)\check{x}^w-hs$
 REDUP-stand-outside
 “trees standing or people standing outside” (cf. $\lambda oʔs$, “tree”) (FirstVoices, 2009)

²⁵The use of $\lambda oʔs$ for “tree”, although commonly heard, is also a common complaint by some speakers, who feel it is inappropriate and should mean that a *person* is standing outside. It is possible that this complaint rests on the distinction between λ - (“long thing standing”) and $\lambda a\check{x}^w$ - (“person standing”) (Boas and Hunt, 1905; Boas et al., 1947); the form we would predict for the former is $\lambda aʔs$, which I have heard from one speaker. Perhaps at some point $\lambda aʔs$ (“long thing standing outside”) and $\lambda oʔs$ (“person standing outside”) became confused, leading to the use of $\lambda oʔs$ for “tree”. Even some speakers who do not retain $\lambda aʔs$, and use $\lambda oʔs$ instead, still express dissatisfaction with $\lambda oʔs$ for “tree”.

- b. $\check{g}ax\check{g}u\check{?}s$
 $\check{g}ax\text{-}\check{g}(a)x^w\text{-}h_s$
 REDUP-hang-outside
 “many things hanging outside” (cf. $\check{g}o\check{?}s$ “thing hanging outside”)
 (FirstVoices, 2009)

A.5.8 [ɛ] and [o] from /ya/ and /wa/

When a root ending in /Cy/ or /Ce/ is followed by an *a*, we find a contraction of the *ya* and *wa* to [ɛ] and [o] respectively.²⁶

- (844) a. $\acute{c}\epsilon mas$
 $\acute{c}y\text{-}amas$
 draw.water-CAUS
 “to cause to draw water” (Boas et al., 1947, p. 315)
- b. $ca\acute{c}\epsilon la$
 $ca\text{-}cy\text{-}w\text{-}ala$
 REDUP-get.water-return
 “to dip water in return” (Boas et al., 1947, p. 322)
- c. $\check{g}\epsilon la$
 $\check{g}y\text{-}ala$
 long.time-ongoing.position
 “for a long time, away for a long time”
- d. $yola$
 $yw\text{-}ala$
 wind-ONGOING
 “wind”

This alternation is the likely explanation for the limited shapes of *CV* verb stems in Kwa-k’wala, which only seem to have the forms *Ca*, *Cɛ*, and *Co*. Boas et al. (1947, p. 308) analyze these as the ubiquitous verbal ending *-a* added to stems of the form *C*, *Cy*, and *Cw*.^{27,28}

²⁶In many words I cannot reliably perceive a difference between this *ɛ* and regular *e*, so elsewhere I usually transcribe this as *e*. In this section, however, I defer to Boas here who transcribes this as *ā*, which usually corresponds to what I hear as *ɛ*.

²⁷To be precise, he gives the stems the form *Cəy* and *Cəw*.

²⁸I do not always gloss these *a*’s as separate morphemes, because of their minimal meaning and the (to me)

(845) a. **cɛ**
cy-a
get.water-A
“to get water”

b. **sɛ**
sy-a
put.up-A
“to put up”

(Boas and Hunt, 1905, p. 520)

c. **çɔ**
çw-a
give-A
“to give”

d. **to**
tw-a
attack-A
“to attack”

(Boas et al., 1947, p. 308)

This alternation is also seen due to stem weakening (§A.7.1.2), in which a /Cs/ or /Cç^w/ stem weakens to *Cy* or *Cw* and an /a/ follows.

(846) a. **x^wɛyu**
x^ws-wayu
strike-INSTR
“club”

b. **pɛçi**
ps-was-hi
shaman-PLACE-NMZ
“dish of shaman”

(Boas et al., 1947, p. 319)

c. **həbɛyu**
hbs-wayu
fur-INSTR
“paintbrush”

(FirstVoices, 2009)

unclear circumstances where exactly they can, may, or must occur, but phenomena like this do suggest that the grammar of the language treats them as a separate morpheme.

- d. $\acute{c}\acute{o}\acute{c}i$
 $\acute{c}\acute{x}^w\text{-}_w\text{as-}_h\text{i}$
 wash-PLACE-NMZ
 “wash basin”

We see this, as well, when the “place” suffix $\text{-}_w\text{as}$ follows the location suffix $\text{-}_h\text{s}$ (“on the ground”).²⁹ This explanation accounts for an otherwise puzzling alternation, by which “on ground” usually surfaces as $[-_h\acute{o}s]$ (847) but occasionally seems to surface as $[-_h\acute{\epsilon}s]$ (848).

- (847) $g\acute{u}k^w\acute{\epsilon}s$
 $g\acute{u}k^w\text{-}_h\text{s}$
 house-on.ground
 “house on ground (as opposed to a house on stilts)” (FirstVoices, 2009)

- (848) a. $g\acute{u}k^w\acute{\epsilon}s$ (< $g\acute{u}k^w\text{yas}$)
 $g\acute{u}k^w\text{-}_h\text{s-}_w\text{as}$
 house-on.ground-PLACE
 “house place on ground” (Boas et al., 1947, p. 318)

- b. $\acute{w}i\acute{q}\acute{\epsilon}s$ (< $\acute{w}i\acute{q}\text{yas}$)
 $\acute{w}i\acute{q}\text{-}_h\text{s-}_w\text{as}$
 witchcraft-on.ground-PLACE
 “place of witchcraft” (Boas et al., 1947, p. 318)

- c. $\acute{q}\acute{\alpha}m\acute{\epsilon}s$ (< $\acute{q}\acute{\alpha}m\text{yas}$)
 $\acute{q}\acute{\alpha}m\text{-}_h\text{s-}_w\text{as}$
 sing-on.ground-PLACE
 “place of singing” (Boas et al., 1947, p. 318)

Note, however, that this alternation does not seem to occur when preceded by +R material – the above occurs only in cases where an -R consonant precedes /ya/ or /wa/.³⁰ If a +R segment precedes, the realization is just [ya] and [wa].³¹ Put another way, the [ε] and [o] realization only occurs when we would otherwise expect to find [Cəya] and [Cəwa], not when we would expect to find [CRya] and [CRwa] (where R represents a +R segment).

²⁹This is parallel to the very common $\text{-}_w\text{ilas}$ (< $\text{-}_w\text{il-}_w\text{as}$, “indoors place”) and the somewhat less common $\text{-}_w\text{id}^{\acute{z}}\text{as}$ (< $\text{-}_w\text{is-}_w\text{as}$, “field, flat area”, lit: “on-beach place”) suffix combinations.

³⁰Presumably, this would also occur when a +R consonant precedes but needs to be an onset, but I do not have examples of this.

³¹This is one of the few cases where the syllabification algorithm would have to look “ahead” on a right-to-left parse (§A.3.2).

- (849) a. $\dot{m}\acute{o}nyayu$ ($*\dot{m}\acute{o}n\epsilon yu$)
 $\dot{m}ns\text{-}_w ayu$
 measure-INSTR
 “ruler, measuring tape, scale”
- b. $h\acute{o}myan\acute{o}m$ ($*h\acute{o}m\epsilon n\acute{o}m$)
 $h\acute{o}ms\text{-}_w an\acute{o}m$
 pick.berries-obtained
 “obtained by berrying” (Boas et al., 1947, p. 317)
- c. $c\acute{o}lwad$ ($*c\acute{o}lod$)
 $clx^w\text{-}_w ad$
 crabapple-have
 “having crabapples” (Boas et al., 1947, p. 316)

A.5.9 Vowel summary

Kwak’wala has a rich phonetic inventory of vowels, and a considerably smaller inventory of phonemic vowels, although exactly which vowels are phonemic remains unclear. Moreover, the apparent fossilization of some vowel alternations has probably led to some vowels that may have not been historically underlying (like [o] and [ə]) to be reanalyzed in some words as underlying.

Nonetheless, I adopt for this investigation a more minimalist phonemicization of the vowels, in which the only phonemic vowels are /a/, /u/, and /i/ and other phonetic vowels are generated according to the correspondences in Table A.3. This is essentially the same inventory proposed in Lincoln and Rath (1980) (as /a/, /w/, and /y/) except that I follow Boas et al. (1947) in the assumption that there are at least some instances of [u] and [i] that represent /u/ and /i/ rather than /w/ and /y/.

In transcribing examples, I have adopted the common Kwak’wala orthographic convention of representing any of [ə], [ɪ], or [ʊ] as ə. The lowered high vowels in the presence of uvulars vary between higher and more middle realizations; I usually transcribe these as high.³² Otherwise, I transcribe using the surface forms given in Table A.3.

The correspondences proposed here are by no means a complete account of Kwak’wala vocal phonology; it may be, for example, that more sophisticated rules could dispense with /i/ and

³²There are some instances in which a probable /i/ in contact with a uvular has a fairly clear realization as [e] rather than lowered [i]; in this work I transcribe these as mid vowels in case something more complicated is occurring, like a preceding /a/, that I have missed.

Surface form	Proposed underlying form
[ə], [ɪ], [ʊ]	(epenthetic, quality depends on neighboring consonants)
[i]	/i/; /y/ before C or #
[iʔ]	/iʔ/; /yʔ/; /ỵ/ before C or #
[u]	/u/; /w/ before C or #
[uʔ]	/uʔ/; /wʔ/; /ẉ/ before C or #
[e]	/ay/ before C or #
[eʔ]	/ạy/ before C or #
[ị] or [e]	/i/ next to a uvular
[o]	/aw/ before C or #; /wa/ after C
[oʔ]	/aẉ/ before C or #
[ʊ] or [o]	/u/ next to a uvular
[ɛ]	/ya/ after C
[ɛ] or [ɛʔ]	/aa/
[əʔan], [æ̣n], or [æʔn]	/an/
[əʔe] or [eʔe]	/ai/
[əʔo] or [oʔo]	/au/

Table A.3: Proposed underlying forms for Kwak’wala surface vowels

/u/, or that exceptional or fossilized forms end up requiring underlying mid vowels or schwas. I adopt these correspondences primarily because they provide the most stable underlying forms of morphemes for the investigation in Parts II and III.

A.6 Other phonological rules

A.6.1 Progressive rounding

After a rounded vowel, non-rounded dorsal consonants become rounded.³³

- (850) a. ʔuq̣ʷa
 ʔw-q̣ʷa
 so-feel
 “to believe” (Lit: “to feel that it is so”)

³³Boas et al. (1947, p. 214) say that “All k sounds following o, u are palatalized”, but this seems to be a typo given their examples, and that the next sentence is “The labialization occurs also when...”

- b. **bux^wʔid**
bw-xʔid
 leave-CHANGE
 “to leave” (Boas et al., 1947, p. 214)

Boas et al. (1947, p. 214) note that rounded dorsals sometimes do and sometimes do not cause the same effect on following non-rounded dorsals; (851) is one instance where they do.

- (851) a. **dadu^xw^kʔinala**
da-duq^w-kin-ala
 REDUP-see-accidentally-ONGOING
 “to see by chance” (Boas et al., 1947, p. 245)

A.6.2 Regressive unrounding

Also, before a rounded vowel, rounded dorsals become non-rounded dorsals. This is more noticeable in the velar series, since non-rounded dorsals are palatalized.

- (852) a. **ʔəwi^hak^ola**
ʔw-i^hak^w-ola
 so-area-on.water
 “islands” (Boas et al., 1947, p. 333)
- b. **yaq^ola**
yaq^w-ola
 corpse-on.water
 “dead body adrift” (Boas et al., 1947, p. 333)
- c. **la^xola**
la^x^w-ola
 stand-on.water
 “[of a person] to stand on the sea” (Boas et al., 1947, p. 333)

We can also see this happening between consonants, in §A.5.2.

A.6.3 Fricativization

Before another consonant or a word boundary, it is very frequent that dorsal stops, /ʎ/, and sometimes /ʎ/ are realized as their fricative counterparts; that is, that /k/ is realized as [x], /kʷ/ as [xʷ], /q/ as [ǰ], /qʷ/ as [ǰʷ], and /ʎ/ and /ʎ/ as [ɬ]. Boas (1947, pp. 210–211) characterizes this as a property of rapid speech, but many modern speakers exhibit this change even in slow speech, and for some instances (such as the realization of the medial visible postnominal /=q/ as [=ǰ] word-finally) it may for some speakers be obligatory.

- (853) a. loʎ ~ loɬ
 loʎ
 get
 “get, receive”
- b. ʔikmən ~ ʔixmən
 ʔik=ʔm=n
 good=VER=1
 “I am well.”

Both the stopped and fricativized forms are encountered in writing.

Some coda clusters inhibit fricativization, such as /ʎʎ/, which remains [ʎʎ] rather than becoming [ɬ] or [ɬɬ].

- (854) ʔoʔəmʎən kʷəʔeɬʎ
 ʔwa=ʔm=ʎ=n kʷ-wiɬ=ʎ
 so=VER=FUT=1 sit-indoors=FUT
 “I’m just going to stay inside.”

A.6.4 /d/-loss

/d/ is frequently dropped word-finally; this is often the final /d/ in *-xʔid* or one of its variant forms.

- (855) a. ʔitid ~ ʔiti
 ʔit-xʔid
 again-CHANGE
 “again”

Both the forms with [d] and those without are encountered in writing.

A.6.5 /w/ and /w̥/ after dorsals and fricatives

/w/ and /w̥/ have particular and unexpected realizations after dorsals and fricatives. Usually, when /w/ and /w̥/ appear between consonants, they are realized as [u] and [uʔ] respectively, but after dorsals and fricatives they can appear as [wə] and [w̥ə].

(856) a. ʔiʔaχəluʔt
 ʔiʔaχ-l-w̥t
 work-ONGOING-fellow
 “co-worker”

b. laʔstuʔt
 la-ʔst-w̥t
 go-in.water-fellow
 “fellow bather”

(Hall, 1888a, p. 64)

(857) a. qasw̥ət
 qas-w̥t
 walk-fellow
 “walking partner/companion”

(FirstVoices, 2009)

b. ʔəml̥w̥ət
 ʔml̥-w̥t
 play-fellow
 “teammate, play-fellow”

We can also see this happening after *p* in (858).

(858) napw̥əstəla
 np-wst-la
 throw-upriver-ONGOING
 “to throw upriver”

I am not sure whether this is true for every instances of /w/ and /w̥/ or just those in certain suffixes like -w̥t (“companion, fellow”) and -wsta (“out of water, upriver”)³⁴.

³⁴This latter is probably -w (“out”) and -ʔsta (“water, in water”).

A.6.6 Special changes involving /s/

/Cs/ clusters often have special realizations involving [c].

/t/ followed by /s/ results in [tʃ] (Boas et al., 1947, p. 211)³⁵:

(859) a. məʔtʃəmɡusto
məʔtʃ-sm-gusto
two-round-up
“twenty”

b. kʷitʃuʔ
kʷitʃ-sw̃
feast-PASS
“to be feasted”

(Boas et al., 1947, p. 211)

/s/, /d/, or /t/ followed by /s/ results in [c] (Boas et al., 1947, p. 211):

(860) a. qaciʔstəla
qas-siʔst-la
walk-around-ONGOING
“to walk around”

(Boas et al., 1947, p. 211)

b. gəlulʔxʔicuʔ³⁷
gəlul-xʔid-sw̃
steal-CHANGE-PASS
“was stolen”

c. mig^waca
mig^wat=sa
harbor.seal=3POSS
“seal of the...”

(Boas et al., 1947, p. 211)

The sequence /sxs/ creates an unusual sound that is not like other sounds in the language, something like a [ch], that is, a coronal affricate followed by an [h] or with unusually strong aspiration.³⁸ I transcribe this as its underlying form *sxs*, since there is no particular orthographic convention to express this sound.

³⁵I often hear this as if it is [tʃ].

³⁷Sometimes the /d/ is dropped instead; I sometimes encounter *-xʔisuʔ* for this combination as well.

³⁸For some time, I heard *kiʔsxsəmən* as if it were *kiʔc hēmən*, as if it were two words, since *h* cannot occur word-medially except in reduplicated words like *hiʔhəmap* (“to eat (pl.)”) (§A.2.5).

- (861) $\acute{k}i\eta s x s e m \acute{a}n$ $[\acute{k}i\eta c^h e m \acute{a}n]$
 $\acute{k}i\eta s-xse=\eta m=n$
not-continue=VER=1
‘‘I still don’t...’’

A.7 Morphophonology

Kwak’wala exhibits complex lexical morphophonology; in particular, the addition of a suffix can cause various kinds of changes to the root. Consider, for example, the following stems based on the root bk^w (‘‘man, male’’), appearing variously as $b\acute{a}k^w$, $b\acute{a}g^w$, $b\acute{a}k^w$, $bab\acute{a}g^w$, $bab\acute{a}k^w$, bag^w , and bak^w .

- (862) a. $b\acute{a}k^w\acute{a}m$
 $bk^w-(\acute{g})m$
man-face
‘‘without expression, sternly’’ (FirstVoices, 2009)
- b. $b\acute{a}g^w\acute{a}n\acute{a}m$
 $bk^w-w\acute{a}n\acute{a}m$
man-person
‘‘man’’
- c. $b\acute{a}k^w\acute{a}s$
 bk^w-hs
man-on.ground
‘‘wild man of the woods’’
- d. $bab\acute{a}g^w\acute{a}m$
ba- bk^w-rw m
REDUP-man-DIMIN
‘‘boy’’
- e. $bab\acute{a}k^w\acute{a}$
ba- bk^w-rh a
REDUP-man-TRY
‘‘try to be a man’’

f. **bag^wans**
bk^w-_{ew}ans
 man-found.unexpectedly
 “visitor”

g. **bak^wəm**
bk^w-_{eh}m
 man-genuine
 “First Nations person, specifically of the Northwest coast cultural area”

These are not simply different roots, or random variation; the changes that *bk^w* will undergo are predictable³⁹ from which suffix attaches to it.

A suffix in Kwak’wala can condition a number of morphophonological changes, in the suffix itself or in the stem to which it attaches. It can

- “extend” a stem schwa to a full [a]
- cause the stem to reduplicate
- “weaken” or “harden” the last consonant in the stem
- delete the initial consonant in the suffix

These are marked in the glosses with subscripts (_r for reduplication, _e for extension, _w for weakening, _h for hardening) and by putting “droppable” consonants in parentheses.

A single suffix can participate in several of these changes; many reduplicating and extending suffixes are also weakening or hardening (e.g. 862d-862g), and a suffix like *-k_ha* (“to sound like”) hardens the stem if and only if it loses its initial dorsal:

(863) a. wík^ʷala
 wí-(k)_ha-la
 WH-SOUND-ONGOING
 “what does [it] sound like?”

b. ǰənt^ʷala
 ǰnt-(k)_ha-la
 snore-sound-ONGOING
 “snoring, the sound of snoring”

³⁹There are some roots and suffixes that are simply irregular, and some classes of segments mutate more predictably than others, but for the most part stem changes are predictable.

Consonant	Weakened:	Hardened:
p	b	p̣
t	d	ṭ
ʎ	λ	ʎ̣
k	g	ḳ
k ^w	g ^w	ḳ ^w
q	ǰ	q̣
q ^w	ǰ ^w	q̣ ^w
s	d ^z or y	ç or ỵ
ʎ	l	ʎ̣
x	n	x̣
x ^w	w	x̣ ^w
ǰ	ǰ	ǰ̣
ǰ ^w	w	ǰ̣ ^w
m	ṃ	ṃ
n	ṇ	ṇ
l	ḷ	ḷ
w	ẉ	ẉ
y	ỵ	ỵ

Table A.4: Kwak’wala weakened and hardened consonants

These changes are “distinctive”, in the sense that they distinguish possible meanings. For example, there are several suffixes that surface can as [ə̣m], and their effects on stems (for example in 862a, 862d, and 862g) are the only way to tell them apart.

It should also be noted that many suffixes only affect stems that end in particular consonants (for example, only extending stems that end in resonants, or only weakening stems that end in non-resonants), and many are simply irregular in their effect.

A.7.1 Mutation

The most common change a suffix can cause is to mutate the consonant preceding it, usually to a glottalized or voiced counterpart. Boas et al. (1947) term these changes “hardening” and “weakening” respectively.⁴⁰ These changes are not always phonetically “transparent”; the targets of weakening and hardening can be (as in the case of *x* to *n*) somewhat idiosyncratic.

A stem may have multiple weakening and hardening suffixes.⁴¹

⁴⁰I follow this usage, in large part because they can be abbreviated without ambiguity, whereas their counterpart words “strengthening” and “softening” could lead to confusion in abbreviation, as could “lenition” with “lengthening”.

⁴¹At one point, Boas et al. (1947, p. 226) note that “suffixes ending in consonants are not affected by weakening or hardening suffixes”. This must be an overgeneralization or a misinterpretation of something in Boas’s notes;

- (864) a. $\acute{k}ad\acute{a}g^w\acute{a}\acute{c}i$
 $\acute{k}at\text{-}_w\mathbf{k}^w\text{-}_w\mathbf{as}\text{-}_h\mathbf{i}$
 write-PART-PLACE-NMZ
 “envelope, mailbox” (lit: “container for the output of writing”)

A.7.1.1 Mutation of voiceless stops and affricates

Voiceless stops and affricates have mutation patterns that are phonetically transparent: they weaken to their voiced counterpart and harden to their ejective counterpart.

p weakens to *b* (865) and hardens to *p'* (866).

- (865) a. $\acute{t}ibayu$
 $\acute{t}ip\text{-}_w\mathbf{ayu}$
 step-INSTR
 “shoe”
- b. $s\acute{a}bilas$
 $sp\text{-}_w\mathbf{il}\text{-}_w\mathbf{as}$
 project.light-indoors-PLACE
 “cinema, movie theater”
- (866) a. $x^w\acute{i}p'inu\check{x}^w$
 $x^w\mathbf{i}p\text{-}_h\mathbf{inu}\check{x}^w$
 whistle-expert
 “expert whistler, good at whistling”
- b. $x^w\acute{a}p'əs$
 $x^w\mathbf{p}\text{-}_h\mathbf{s}$
 hole-on.ground
 “hole in the ground”

t weakens to *d* (867) and hardens to *t'* (868).

- (867) a. $\acute{k}ad\acute{a}k^w$
 $\acute{k}at\text{-}_w\mathbf{k}^w$
 write-PART
 “letter, something written”

while it is true for a few suffixes, many of his morphological analyses assume the contrary.

- b. qəɖəlk^w
qt-_wlk^w
argue-always
“stubborn”
- (868) a. ḳaṭinuχ^w
ḳat-_hinuχ^w
write-expert
“good writer”
- b. gəlṭəχst
gḷt-_hχst
long-end
“tall”

We would expect /c/ to weaken to [dʒ] and harden to [č], but I have not managed to find any stems that unambiguously end in /c/; all the [dʒ] and [č] realizations I have found seem to end in /s/. This may be due to something like a c/s merger in this position (§A.7.1.2).

ʃ weakens to λ (869) and hardens to ʃ̣ (870).

- (869) a. kiλanəm
kiʃ̣-_wanm
net.fish-obtained
“fish caught by net”
- b. duχ^wʔaλəɬ
duq^w-ʔaʃ̣-_wɬ
see-sense-STIM
“something seen”
- (870) a. hənʃ̣inuχ^w
hnʃ̣-_hinuχ^w
hunt-expert
“good hunter”

- b. ʔa^hʔi
 ʔa^hʔ_{-h}i
 behind-NMZ
 “forest, out back, backyard” (Rough lit: “what is behind [the house]”)

k weakens to *g* (871) and hardens to *k* (872).

- (871) a. d^higayu
 d^hik_{-w}ayu
 dig.clams-INSTR
 “digging stick for clams”

- b. t^həxtəgɪl
 t^hik_{-w}ɪl
 REDUP-dirt-floor
 “dirty floor”

- (872) a. n^hik^hiqəla
 n^hik_{-h}iq-la
 say-in.self-ONGOING
 “think” (Lit: “to say internally”)

- b. q^həy^hak^hinu^hχ^w
 q^hy^hak_{-h}inu^hχ^w
 kick-expert
 “soccer player”

k^w weakens to *g^w* (873) and hardens to *k^w* (874).

- (873) a. bəg^wanəṃ
 bk^w_{-w}anəṃ
 man-person
 “man”

- b. çig^wənu
 çik^w_{-w}nu
 seagull-round
 “seagull egg”

(874) a. ʔəwinaʔkʷəs
ʔ-inaʔkʷ-_hs
so-area-on.ground
“ground, land, property”

b. çikʷi
çikʷ-_hi
seagull-NMZ
“seagull”

q weakens to *ǵ* (875) and hardens to *q̣* (876).

(875) a. noǵad
noq-_wad
mind⁴³-REL
“wise, knowledgeable, intelligent”

b. liǵəm
liq-_wm
to.name-NMZ
“name”

(876) a. yəq̣inuχʷ
yq̣-_hinuχʷ
knit-expert
“expert knitter”

b. naq̣imas
naq̣-_himas
drink-CLASS.NMZ
“a drink”

qʷ weakens to *ǵʷ* (877) and hardens to *q̣ʷ* (878).

(877) a. duǵʷəl
duqʷ-_wl
see-STIM
“was seen, something seen”

⁴³*noq-* is both “mind” and “heart”.

- b. $\lambda a\check{g}^w i k \acute{e} l a$
 $\lambda a q^w \text{-} w i k \text{-} l a$
red-back-ONGOING
“having a copper, or a copper design, on one’s back” (FirstVoices, 2009)
- (878) a. $l \acute{a} q^w \acute{e} s$
 $l q^w \text{-} h s$
firewood-on.ground
“fire (outside on the ground)” (FirstVoices, 2009)
- b. $du \acute{q}^w \acute{e} \check{x} s t \acute{e} n d$
 $du q^w \text{-} h \check{x} s t \text{-} n d$
see-end-CHANGE
“looking at the rear end” (FirstVoices, 2009)

A.7.1.2 Mutation of fricatives

The mutation of fricatives is somewhat more unpredictable than of stops and affricates, with fricatives having mutated counterparts that one could not, synchronically, predict.

s weakens to *y* (879) or *dʒ* (880), and hardens to *č* (881) or *y* (882).

- (879) a. $q a y a s$
 $q a s \text{-} w a s$
walk-PLACE
“path, road, route”
- b. $\check{g} \acute{e} l y a y u$
 $\check{g} l s \text{-} w a y u$
paint-INSTR
“paintbrush”
- (880) a. $m i d \acute{z} \acute{e} l$
 $m i s \text{-} w l$
smell-STIM
“what is smelled”

- b. $\dot{t}ud^zək^w$
 $\dot{t}us-wk^w$
 cut.with.knife-PART
 “something cut with a knife”
- (881) a. $\dot{w}a\dot{c}i$
 $\dot{w}as-hi$
 dog-NMZ
 “dog”
- b. $sa\dot{c}əm$
 $sas-ehm$
 spring.salmon-genuine
 “spring salmon”
- (882) a. $xu\dot{y}ən\check{x}$
 $xus-hn\check{x}$
 rest-season
 “resting time, weekend, Saturday (for fishermen)”
- b. $\text{ʔəʔabə\dot{y}a}$
 $\text{ʔa-ʔabəls-}_{rs}a$
 REDUP-apple-try
 “picking apples” (FirstVoices, 2009)

[č] and [dʒ] would be the expected mutation targets for /c/, which, as I mentioned in §A.7.1.1, does not seem to end stems except in some loanwords like *labic* (“rabbit”) and *kalic* (“carrot”). Given the apparent absence of roots and suffixes ending in *c*, and the unusually variable mutation possibilities for /s/, this suggests a merger of /s/ and /c/ to /s/ morpheme-finally, where *-c stems were reanalyzed as -s stems and [č] and [dʒ] were reanalyzed as additional mutation possibilities for /s/. However, we cannot assume that /c/ and /s/ remain underlyingly separate; whether a stem mutates to [č] or [y] and [dʒ] or [y] seems to be arbitrary, and sometimes both mutations are possible for the same stem.

- (883) a. $qənd^zayu \sim qənyayu$
 $qns-wayu$
 to.adze-INSTR
 “an adze”

- b. $\acute{q}\acute{a}d^z\acute{a}k^w \sim \acute{q}ik^w$
 $\acute{q}s\text{-}w\acute{k}^w$
 eat.meat-PART
 “meat eaten”

(Boas et al., 1947, p. 359)

- c. $\acute{w}alad^zas \sim \acute{w}alayas$
 $\acute{w}alas\text{-}w\acute{a}s$
 big-NMZ
 “size”

- d. $\acute{m}\acute{a}nd^z\acute{a}yu \sim \acute{m}\acute{a}nyayu$
 $\acute{m}ns\text{-}w\acute{a}yu$
 measure-INSTR
 “a measure, measuring tape, ruler”

This is not simply an idiolectal or dialectal difference; I have encountered both forms of “adze” and “measure” from the same speaker.

ł weakens to *l* (884) and hardens to *l'* (885).

- (884) a. $\text{ʔ}\acute{a}ml\acute{a}m$
 $\text{ʔ}ml\text{-}w\acute{m}$
 play-NMZ
 “toy”

- b. $k\acute{a}lwilas$
 $klx^w\text{-}w\acute{il}\text{-}w\acute{a}s$
 buy-indoors-PLACE
 “store”

- (885) a. $mi\check{x}\text{ʔ}\acute{a}l^s$
 $mi\check{x}\text{-}(g)l\text{-}h\acute{s}$
 sleep-away-on.ground
 “to fall asleep outside”

- b. $y\acute{a}ml^s\acute{a}l$
 $ym\text{-}l^s\acute{a}l$
 burst-easily
 “easily burst”

(Boas et al., 1947, p. 322)

x weakens to *n* (886) and hardens to *ṇ* (887).

(886) a. mənɑ̌ci
mɪx_{-w}as_{-h}i
strike-PLACE-NMZ
“drum”

b. kəlnas
klɪx_{-w}as
roll-PLACE
“road”

(FirstVoices, 2009)

(887) a. maŋ̣əm
mɪx_{-eh}m
fist-genuine
“hit with fist and nothing else”

(Boas et al., 1947, p. 302)

b. qaqaŋ̣a
qa-qɪx_{-h}a
REDUP-put.on.ring-try
“to try to put on a ring”

(Boas et al., 1947, p. 309)

x^w weakens to *w* (888) and hardens to *ẉ* (889):

(888) a. kəlwanəm
klɪx^w_{-w}anm
buy-obtained
“something bought”

b. ǵawǎci
ǵax^w_{-w}as_{-h}i
hang-PLACE-NMZ
“closet”

(FirstVoices, 2009)

(889) a. yəẉʔinuχ̣^w
yɪx^w_{-h}inuχ̣^w
dance-expert
“dancers”

- b. ləm^ʷəm^ʷyá
 lm^{xʷ}-_hm^ʷyá
 dry-cheek
 “dry cheek”

(Boas et al., 1947, p. 303)

\check{x} does not appear to weaken (890) or harden (891). At least sometimes, it becomes $\check{x}ʷ$.

- (890) a. ʔə^ʃilas
 ʔ^ʃ-_wil-_was
 do-indoors-PLACE
 “where you put stuff, storage place”

- b. ʔə^ʃʔas
 ʔ^ʃ-_was
 do-PLACE
 “place”

- (891) a. mami^ʃʔa
 ma-mi^ʃ-_ha
 REDUP-sleep-try
 “try to sleep”

- b. dən^ʃʔinu^{ʃʷ}
 dn^ʃ-_hinu^{ʃʷ}
 sing-expert
 “good singer”

$\check{x}ʷ$ weakens to w (892) and hardens to w' (893).

- (892) a. λawil
 λa^{ʃʷ}-_wil
 stand-indoors
 stand inside

- b. ćuwilas
 ću^{ʃʷ}-_wil-_was
 wash-indoors-PLACE
 “laundromat”

(893) a. ǵ^waǵ^wina
 ǵ^waǵ^w-_hina
 raven-NMZ
 “raven”

b. ǵ^waǵ^wala
 ǵ^waǵ^w-(k)_ha-la
 raven-sound-ONGOING
 “cawing of raven”

(FirstVoices, 2009)

A.7.1.3 Mutation of plain resonants

When resonants mutate, they both harden and weaken to their glottalized counterpart.

Observing the mutation patterns of plain resonants can be difficult. Some mutating suffixes (such as *-_wayu*, “instrument”) do not mutate the plain resonants, and some suffixes seem to be irregular in this regard. In addition, the resulting glottalized resonants are difficult to hear, and in the case of the glides *ỵ* and *ẉ* are realized in syllabic nuclei as *iʔ* and *uʔ* respectively, so sometimes the presence of the glottalized resonant can only be inferred.

m weakens to *ṃ* (894) and hardens to *ṃ* (895).

(894) a. ǰa^hṃa^hci
 ǰa^hṃ-_{ew}as-_hi
 pray-PLACE-NMZ
 “church”

b. kaka^htə^hṃayu
 ka^h-ka^ht-g^m-_wayu
 REDUP-write-face-INSTR
 “camera”

(895) a. $\text{na}\dot{\text{n}}\dot{\text{a}}\text{m}^{\text{a}}$
 $\text{na}\text{-}\dot{\text{n}}\text{m}\text{-}_{rh}\text{a}$
 REDUP-one-try
 “nine” (lit: “try for one [more]”)

b. $\text{ʔud}^z\dot{\text{a}}\dot{\text{g}}\dot{\text{a}}\text{m}^{\text{a}}\text{ak}$
 $\text{ʔud}^z\text{-}\dot{\text{g}}\text{m}\text{-}_{h}\text{ak}$
 wrong-face-disposition
 “of jealous disposition”

(Boas et al., 1947, p. 320)

n weakens to \dot{n} (896) and hardens to \dot{n} (897).

(896) a. $\text{g}^w\text{a}\dot{\text{n}}\text{as}$
 $\text{g}^w\text{n}\text{-}_{ew}\text{as}$
 pay.debt-PLACE
 “place where debt is paid”

(Boas et al., 1947, p. 318)

b. $\text{w}\dot{\text{a}}\dot{\text{n}}\text{i}\lambda\dot{\text{a}}\text{la}$
 $\text{w}\dot{\text{a}}\text{n}\text{-}_{w}\text{i}\lambda\text{-la}$
 hide-into.house-ONGOING
 “sneaking into the house”

(FirstVoices, 2009)

(897) a. $\text{h}\dot{\text{a}}\dot{\text{n}}\text{a}$
 $\text{hn}\text{-}_{h}\text{a}$
 put.container-on.rock
 “container sitting on stove”

(FirstVoices, 2009)

b. $\text{q}\dot{\text{a}}\dot{\text{n}}\text{i}\text{nu}\check{\text{x}}^w$
 $\text{q}\text{n}\text{-}_{h}\text{i}\text{nu}\check{\text{x}}^w$
 sew-expert
 “seamstress, someone good at sewing”

(FirstVoices, 2009)

l weakens to l' (898) and hardens to l' (899).

(898) a. $\text{di}\text{gi}\dot{\text{l}}\text{a}\dot{\text{c}}\text{i}$
 $\text{di}\text{-gi}\text{-l}\text{-}_{w}\text{as}\text{-}_{h}\text{i}$
 tea-do-ONGOING-PLACE-NMZ
 “teapot”

- b. wəl^hit
 wɫ-w_hit
 stop?-indoors
 “to be put in jail, or someone in jail”

- (899) a. məməl^həmxʔid
 m-mɫ-_{eh}m-xʔid
 REDUP-white-genuine-CHANGE
 “to get really white” (Boas et al., 1947, p. 302)

- b. gağəl^ha
 ga-gl-_{rh}a
 REDUP-crawl-try
 “to try/to be ready to crawl” (Boas et al., 1947, p. 309)

/w/ weakens to [w̥] and hardens to [w̄].

- (900) a. ǵ^wiʔsta^{w̄}as
 ǵ^wi-ʔstw-w_has
 INDEF-eye-NMZ
 “color”
- b. ba^{w̄}as
 b^w-w_has
 leave-PLACE
 “place of leaving” (Boas et al., 1947, p. 318)

- (901) a. pəpə^{w̄}a
 pə-p^w-_{rh}a
 REDUP-halibut-try
 “try to catch halibut”
- b. ǵaǵi^{w̄}a
 ǵa-ǵi^w-_{rh}a
 REDUP-deer-try
 “deer hunting” (FirstVoices, 2009)

/y/ weakens to [y̥] and hardens to [ȳ].

- (902) a. ca^ʔas
 cy-_{ew}as
 draw.water-PLACE
 “place of drawing water” (Boas et al., 1947, p. 318)
- b. ga^ʔa^ʔci
 gy-_{ew}as-_hi
 put-PLACE-NMZ
 “cupboard” (FirstVoices, 2009)
- (903) a. cacə^ʔa
 ca-cy-_{rh}a
 REDUP-draw.water-try
 “to try to draw water” (Boas et al., 1947, p. 309)
- b. qəqə^ʔə^ʔm
 q-_qy-_hm
 REDUP-much-genuine
 “really many” (Boas et al., 1947, p. 302)

A.7.1.4 Mutation of final *a*

While many instances of final *a* in Kwak’wala stems are there for other (and sometimes unclear) reasons, some roots and suffixes appear to actually end in *a*. When these stems receive mutating suffixes, the /a/ is realized as [əʔ]. This is the same realization we see for /a/ before vowels (§A.5.3). So, when the mutating suffix is vowel-initial, we simply see the form we might expect if the suffix were not mutating at all.

- (904) a. ləʔstəʔa^ʔci
 l-ʔsta-_was-_hi
 go-in.water-PLACE-NMZ
 “bathtub”
- b. cəlx^wstəʔa^ʔci
 cəlx^w-ʔsta-_was-_hi
 hot-water-PLACE-NMZ
 “thermos” (FirstVoices, 2009)

- c. $\lambda i\check{x}s\text{?}\text{ə?}ak^w$
 $\lambda i\check{x}s\text{-}(k)\text{?}a\text{-}_w k^w$
 advise-sound-PART
 “educated, someone who has been advised or taught” (FirstVoices, 2009)

However, we can observe that the “participle” suffix $-_w k^w$ results in an $\text{ə?}ak^w$ in (904c), rather than just ak^w , which we would expect if this suffix were not a mutating suffix, so we cannot simply say that no mutation is happening at all. I think it makes the most sense, overall, to propose that the mutation of /a/ is [ʔ] (which I posited as the glottalized counterpart to the glottal resonant in §A.5.3), in the same way that the mutation of other resonants is their glottalized counterpart:

	Weakened	Hardened
	m	ṁ
	n	ṅ
(905)	l	ḷ
	y	ỵ
	w	ẉ
	a	ʔ

A.7.1.5 Mutation of ejective and voiced stops and affricates

There are not many stems that end in ejective or voiced oral stops and affricates, but those that do receive the same ə? realization as stems ending in /a/. That is, a stem like $y\text{ə}n\check{k}\text{-}$ or $w\text{ə}d\text{-}$ mutates as if it were $y\text{ə}n\check{k}a\text{-}$ or $w\text{ə}da\text{-}$.

- (906) a. $\text{q}\text{ə}^{\text{?}}\lambda^{\text{?}}\text{ə?}ok^w$
 $\text{q}\lambda^{\text{?}}\text{-}_w uk^w$
 six-person
 “six people”

- b. $xac\text{ə?}es$
 $xac\text{-}_w is$
 low.tide-on.beach
 “low tide”

- c. yənkəʔək^w
 ynk^w-k^w
 sling.shot-PART
 “slingshotted”

əʔV sequences can be hard to distinguish after glottalized consonants, and so the *ĈəʔV* is sometimes transcribed as just *ĈV*. For example, *qəʔəʔək^w* (906a) is transcribed in the First Voices word list (2009) as *qəʔək^w*. However, the unexpectedly low realization of /-uk^w/ as [-ok^w] serves as an indication that a schwa precedes.

Sometimes, however, no special realization is seen; *-_wayu*, for example, which more often than most mutating suffixes has irregular forms or fails to mutate altogether, will for some forms like (907) not show any special realization.

- (907) a. yənkayu
 ynk^w-ayu
 slingshot-INSTR
 “slingshot”

We can also observe the *əʔ* realization of mutation after voiced segments in (908).

- (908) a. wədəʔaci
 wd^w-as^{-h}i
 cold-PLACE-NMZ
 “refrigerator”
- b. ʔudʔeɪ
 ʔudʔ-ʔil
 wrong-indoors
 “messy (of a house)”

Note that this realization occurs even if the previous segment would already be in the appropriate “class”, as a mutated segment. That is, when segments like the [d] in *wəd-* (“cold”) or [dʔ] in *ʔudʔ-* (“wrong”) precede a weakening suffix, the [ʔ] is inserted even though [d] or [dʔ] would be appropriate as the results of weakening. In other words, the “mutation” feature does not just introduce a surface constraint on realizations; it is not just that the last segment has to be in a certain class (e.g., that the last segment must be a “weak consonant”).

The [əʔ] realization can also occur when the previous segment has already been mutated. For example, the stem in (909a), *qəquʔ-* (“to learn”), is formed from *qəʔ-* (“to know”) by reduplication and the addition of a hardening suffix *-_{rh}*. When the weakening suffix *-_was* (“place”) is added, the [əʔ] realization occurs.

is added to this stem, the [əʔ] realization occurs, since the previous segment [λ̣] is no longer mutable. In (909b), the stem “nine” is formed by the addition of *-rh* to *nəm* (“one”) – “nine” is literally “try for one [more]” – and then this stem receives *-rh* again to form “try for nine”. Again, since the [ṃ] from the mutation of /m/ is not itself mutable, the [əʔ] realization occurs.

- (909) a. $\acute{q}a\acute{q}u\lambdạ\acute{ə}ʔas$
 $\acute{q}a\acute{q}o\lambdạ\text{-}_{rh}\text{-}_{w}as$
 REDUP-know-try-PLACE
 “school”⁴⁴
- b. $\acute{n}a\acute{n}a\acute{n}\acute{ə}m\acute{ə}ʔa$
 $\acute{n}a\acute{-}\acute{n}a\acute{-}\acute{n}m\text{-}_{rh}\text{-}_{rh}a$
 REDUP-REDUP-one-try-try
 “try to get nine” (Boas et al., 1947, p. 310)

A.7.1.6 Mutation of glottalized resonants

Many glottalized resonants exhibit the əʔ realization of mutation, but as with the plain resonants, some suffixes act irregularly and the difference is often difficult to detect in any case.

- (910) a. $\acute{c}\acute{ə}m\acute{ə}ʔən\check{x}$
 $\acute{c}m\text{-}_{h}n\check{x}$
 melt-season
 “season of melting (ice)” (Boas et al., 1947, p. 305)
- b. $\acute{l}a\acute{l}\acute{ə}ʔəm$
 $\acute{l}a\acute{l}\text{-}_{eh}m$
 dead-genuine
 “really dead” (Boas et al., 1947, p. 302)

A.7.1.7 Mutation of single-consonant roots

When a mutating suffix is added to a single-consonant root like *l-* (“go”) or *d-* (“carry, take”), the [əʔ] realization occurs, even if that consonant is mutable (as in 911a and 911d). In other words, these roots are mutated as if they were *la-*, *da-*, etc.

⁴⁴For many speakers this is $\acute{q}a\acute{q}u\lambdạ\acute{ə}ʔa\acute{c}i$, with *-waci* (“container, vessel, building”), while for other speakers it just has *-was* (“place”).

- (911) a. **lʔas**
l_was
 go-PLACE
 “destination, location”
- b. **dʔək^w**
d_wk^w
 carry-PART
 “carried” (Boas et al., 1947, p. 359)
- c. **kʷəʔelas**
kʷ_wil_was
 sit-indoors-PLACE
 “living room”
- d. **ʔək^w**
ʔ_wk^w
 carry.on.board-PART
 “carried on board” (Boas et al., 1947, p. 359)

This realization is also seen when certain reduplicative patterns leave the root without a nucleus. For example, the suffix *-h*iq** (“inside oneself”), which occurs in various mental states, sometimes occurs with “nucleus-stealing” reduplication (§A.7.2). In roots like *sa-* (“stretch”) and *q*i** (“much, many”) that only consist of a consonant followed by a +R segment, the resulting “one consonant” roots receive the [ʔ] realization of mutation as if they were actual one-consonant roots (A.7.1.7).

- (912) a. **sasəʔeqəla**
sa-sa_hiq-la
 REDUP-stretch-in.self-ONGOING
 “thinking of stretching hand out” (Boas et al., 1947, p. 327)
- b. **q*i*q*i*əʔeqəla**
q*y*-q*y*_hiq-la
 REDUP-much-in.self-ONGOING
 “worry”, or “be busy” (rough lit: “much going on inside”)

- c. wənwəʔeqəla
 wn-w_{n-h}iq-la
 REDUP-hide-in.self-ONGOING
 “thinking about hiding”

A.7.2 Reduplication

There are a number of reduplication patterns in Kwak’wala (Boas et al., 1947; Kalmar, 1999; Struijke, 2000), each choosing a different subsequence of the base to copy. Many of these are induced by the addition of particular suffixes, such that adding a particular suffix (like diminutive *-_{rw}m*) induces in the stem a particular reduplication pattern (in the case of the diminutive, *Ca-*); I indicate this with a subscript *r*.

The most frequent and productive reduplication pattern, used primarily for pluralization, is to take the initial consonant and reduplicate it with a [Ciʔ-] prefix; since this prefix does not affect word stress, it is probably /C_y-/ rather than /Ciʔ-/.

- (913) a. siʔsásəm
 sy'-sasm
 REDUP-offspring
 “children”
- b. ǵ^wiʔǵ^wəyám
 ǵ^wy'-ǵ^wyám
 REDUP-whale
 “whales”
- c. kiʔkiʔa
 ky'-kiʔa
 REDUP-net.fish
 “[of multiple people] went fishing”

The most frequent derivational pattern is *Ca-*, which is used when various suffixes, such as *-_{rw}m* (diminutive), *-_{rh}* (“try to do/get”), and *-_rksi* (“to do, to occupy with”), are added to the base.

- (914) a. **babəg^wəm**
ba-bk^w-_rw^m
 REDUP-man-DIMIN
 “boy”
- b. **mamiχ[?]ə**
ma-miχ[?]-_rh^{=a}
 REDUP-sleep-try=A
 “try to sleep”
- c. **ṅaṅəma**
ṅa-ṅm-_rh^{=a}
 REDUP-one-try=a
 “nine” (Lit: “try to get one [to have ten]”)
- d. **ḱakad_wəχ^wsila.**
ḱa-ḱat-_wk^w-_rksi-la.
 REDUP-write-PART-occupy-ONGOING
 “to read” (lit: “occupy oneself with the result of writing”)

The most notable and unusual Kwak’wala reduplication pattern “steals” the nucleus from the base; that is, the +R nucleus of the first syllable occurs only in the reduplicant and no longer appears in the base in the surface form (Struijke, 1998, 2000). In (915a) and (915b), for example, the /l/ of the roots /sl-/ (“drill”) and /ml-/ (“white”) does not occur in the base, but does occur in the reduplicant.

- (915) a. **səlsəmut**
sl-s(l)-ṁut
 REDUP-drill-remains
 “what is left after drilling” (Boas et al., 1947, p. 310)
- b. **ṁəlməd^zu**
ṁl-ṁ(l)-_wd^zw
 REDUP-white-surface
 “white on surface” (Boas et al., 1947, p. 310)

Note that the coda does *not* occur in the reduplicant, but does remain in the base, as we can see when CVC roots like *χ^waλ* (“cut fish”) and *čux^w* (“wash”) are reduplicated.

(916) a. $\check{x}^w a \check{x}^w \text{ə} \dot{m} \text{u} \text{t}$
 $\check{x}^w a - \check{x}^w (a) \check{\lambda} - \dot{m} \text{u} \text{t}$
 REDUP-cut.fish-remains
 “remains of fish cutting” (Boas et al., 1947, p. 310)

b. $\acute{c} u \acute{c} \text{ə} \check{x}^w \text{ə} g \text{ə} \text{?} \acute{a} \acute{c} i$
 $\acute{c} u - \acute{c} (u) \check{x}^w - g - \text{w} \text{as} - \text{h} i$
 REDUP-wash-dish-PLACE-NMZ
 “kitchen sink” (FirstVoices, 2009)

In most cases a schwa occurs where the nucleus would have been, but it depends on the syllabification; as seen in §A.5.6 and §A.5.7, the resulting lack of a +R nucleus can result in a variety of vowel changes.

(917) a. $l a l u \dot{\lambda} a$
 $l a - l (a) w \check{\lambda} - \text{h} a$
 REDUP-get-try
 “try to get”

b. $y e l a \acute{q} i \acute{q} \text{ə} l a$
 $y a - y (a) l a \acute{q} - \text{h} i \acute{q} - l a$
 REDUP-proud-in.self-ONGOING
 “feel proud” (Boas et al., 1947, p. 327)

c. $\lambda a x \lambda u \text{?} s$
 $\lambda a x - \lambda (a) \check{x}^w - \text{h} s$
 REDUP-stand-outside
 “trees standing or people standing outside” (cf. $\lambda o \text{?} s$, “tree”) (FirstVoices, 2009)

Various reduplicative patterns involve the addition of particular fricatives (s , l , x) to the coda of the reduplicant, like the $[x]$ in (917c); this seems to just be lexically specified.

There are also reduplicant forms that use C(V)C templates.

- (918) a. **səpsəbil**
sp-sp-wil
 REDUP-project.light-floor
 “moon/sun shining on the floor” (FirstVoices, 2009)
- b. **təxtəgil**
tk-tk-wil
 REDUP-dirt-floor
 “dirty floor”

Forms like those in (918) make clear that reduplication takes as its base the form *before* mutation rather than after it.

A.7.2.1 Re-reduplication

Stems that have been reduplicated can themselves be reduplicated.

- (919) a. **biʔbabəg^{wəm}**
bý-ba-bk^{w-w}m
 REDUP-REDUP-man-DIMIN
 “boys”
- b. **naʔnaʔnəməʔa**
na-na-nm-_{rh-rh}a
 REDUP-REDUP-one-try-try
 “try to get nine” (Boas et al., 1947, p. 310)
- c. **diʔdadulola**
dý-da-dulo-l-_{rh}a
 REDUP-REDUP-win-ONGOING-try
 “contestants, players”

In some cases, we can observe redundant plural marking on irregular plural stems.⁴⁵ For example, we might predict that the plural of *bəg^{wanəm}* (“man”) would be *biʔbəg^{wánəm}* (note the apparent glottal stop and the stress on the third syllable), whereas it actually becomes *bibəg^{wanəm}* (note the lack of glottal stop and the stress on the initial syllable). Some speakers

⁴⁵It is worth pointing out that this is not unique to Kwak’wala; English *children* and Dutch *kinderen* (“children”) are likewise derived from historical plurals (*childre* and *kinder*) which received additional, redundant plural marking (*-en*) (Hotze Rullmann, p.c.).

then tend to reduplicate *this* form, as if it were not already plural.

- (920) a. **biʔbíbəg^wanəṃ**
bý-bi-bk^w-_wanəṃ
REDUP-REDUP-man-person
“men”
- b. **giʔgónənanəṃ**
gý-gn-gn-_wanəṃ
REDUP-REDUP-young-person
“children”
- c. **ciʔcácaýa**
cý-ca-caýa
REDUP-REDUP-younger.sib
“relatives, cousins, siblings”
- d. **liʔlíləlola**
lý-li-lələlola
REDUP-REDUP-beloved
“relatives”

A.7.3 Lengthening

Some suffixes systematically “lengthen” roots without a +R nucleus through the addition of an [a]. For example, the familiar root *bk^w* that we find in, for example, *bəg^wanəṃ* (“man”) is also found as *bak^w* before particular suffixes.

- (921) a. **bag^wans**
bk^w-_{ew}ans
man-found.unexpectedly
“visitor”
- b. **bak^wəṃ**
bk^w-_{eh}m
man-genuine
“First Nations person, specifically of the Northwest coast cultural area”

- c. **bak^wəs**
bk^w-_{eh}s
man-AUG.CHAR
“impudent man” (Boas et al., 1947, p. 304)

This change is associated with particular suffixes, like *-amala* (“along the bank of a river”) or *-_eyl^y* (“here and there, back and forth, around”)⁴⁶.

- (922) a. **w^hadamala**
w^hd-_{ew}ama-la
cold-along.riverbank-ONGOING
“cold along the bank of a river” (Boas et al., 1947, p. 315)

- b. **k^wasxamala**
k^wsx-_{ew}ama-la
splash-along.riverbank-ONGOING
“splash along the bank of a river” (Boas et al., 1947, p. 315)

- (923) a. **wa^hil^ela**
w^hl-_eil^y-ala
ask-here.and.there-ONGOING
“ask here and there” (Boas et al., 1947, p. 327)

- b. **çawil^ela**
çw-_eil^y-ala
give-here.and.there-ONGOING
“to give here and there” (Boas et al., 1947, p. 327)

Some suffixes lengthen only under particular conditions. For example, the suffix *-_was* is non-lengthening, except for roots that end in resonants.⁴⁷

- (924) a. **ca^yas**
cy-_{ew}as
draw.water-PLACE
“place of drawing water” (Boas et al., 1947, p. 318)

⁴⁶*-_eyl^y* is somewhat irregular, however, and does not always lengthen its stem.

⁴⁷The form *hanalas*, from *hnλ*, appears to be a counterexample, but it is entirely possible here that the original stem was *hn* and the *tl* is actually the *-λ* of obtaining that we find in *loλ* (“get”), *qoλ* (“know”), *gəluλ* (“steal”), etc.

b. walàci
 wɫ_{-ew}as_{-h}i
 stop?-PLACE-NMZ
 “police station” (FirstVoices, 2009)

c. k^wanaçi
 k^wn_{-ew}as_{-h}i
 smoke-PLACE-NMZ
 “stovepipe” (FirstVoices, 2009)

It is worth noting that this lengthening does not occur when the root only ends in a *surface* resonant, as it does when *was* weakens an /x/.

(925) a. mənaci
 mɪx_{-w}as_{-h}i
 strike-PLACE-NMZ
 “drum”

CRC- roots are sometimes (but are not always) lengthened to *CaRaC-*.

(926) a. hanaλəm
 hnλ_{-eh}m
 hunt-genuine
 “arrow”

b. d^zalax^wiləla
 d^zlx^w_{-e}ily-ala
 run-here.and.there-ONGOING
 “run around”

A.7.4 Initial consonant loss

Some suffixes that begin in dorsal consonants, like *-(ǵ)əm* (“face”) or *-(x)ʔid* (“change, beginning, perfective”), and a few that begin with /s/, like *-(s)iʔsta* (“around”) lose their first consonants after particular classes of sounds.

- (927) a. ɫawisə**m**
 ɫawis-(**ǵ**)**m**
 angry-**face**
 “angry face”
- b. nax^wə**m**ala
 nax^w-(**ǵ**)**m**-ala
 cover-FACE-ONGOING
 “having one’s face covered”
- c. λətə**m**ɫ
 λt-(**ǵ**)**m**-ɫ
 hat-face-NMZ
 “hat”

- (928) a. guk^wila
 guk^w-(**g**)**i**-la
 house-**do**-ONGOING
 “build a house”
- b. qə**m**tila
 qə**m**t-(**g**)**i**-la
 sing.to-baby-do-ONGOING
 “to write a new song”

(FirstVoices, 2009)

One suffix, *-s(ǵ)əm* (“round thing”, but also a number of meanings not particularly connected with roundness), loses its *second* consonant instead; this suggests that it may be a composite of *-s* and the *-ǵəm* seen above.

- (929) a. səka**s**ǵə**m**
 ska-**s(ǵ)****m**
 five-**round**
 “five of something round, five dollars”
- b. kəpsə**m**d
 kp-**s(ǵ)****m**-d
 scissor.motion-**round**-CHANGE
 “pick up a round thing in tongs”

(Boas et al., 1947, p. 344)

A few suffixes, such as *-(ʔs)ta* (“water, in water”) and *-(ʔs)tw* (“eye, opening, color”) can lose both an initial glottal stop and an *s*.

- (930) *çultu*
çul-(ʔs)tw
 ash-eye
 “black”

Loss of a dorsal ejective may either lead to a hardening suffix (931), or a realization as [ʔ] (932).

- (931) a. *x^wi^hpala*
x^wi^p-(k)_ha-la
 whistle-sound-ONGOING
 “whistling”

- b. *çəntala*
çnt-(k)_ha-la
 snore-sound-ONGOING
 “to snore”

- (932) a. *çəsʔəneʔ*
çs-(k)n-a^y
 loose-body-NMZ
 “shirt”

- b. *nəç^wʔəneʔ*
nq^w-(k)n-a^y
 cover-body-NMZ
 “blanket”

A.8 Summary

Kwak’wala exhibits complex phonological and morphophonological systems, but I present them in detail here in order to underline that these patterns are largely *systematic*, and that the morphological arguments seen in other chapters are based on regular morphophonological alternations rather than on irregularities of particular roots, suffixes, or enclitics.

Kwak'wala morphophonology can seem appear wildly irregular, with suffixes causing dramatically different realizations of stems and suffixes, and where stress assignment has dozens of exceptions and stems undergo surprising stress changes due to suffixation and reduplication. In Boas's glossary of suffixes (Boas et al., 1947), many suffixes are presented as having a dozen or more stem-specific realizations with vowel and stress changes, but as Grubb (1977) notes, this is not necessarily because Boas did not understand the basis of these alternations, but that the conceptual vocabulary available at the time made the communication of complex phonological alternations difficult. One result of this is that Kwak'wala morphophonology can look more irregular and unpredictable than it is, and that many regular alternations that Boas discovered have not worked their way into all of the subsequent literature on Kwak'wala.

For the most part, the irregularities of the Kwak'wala vowel and stress systems can be minimized by assuming particular underlying forms, similar to those in Lincoln and Rath (1980), in which Kwak'wala words are mostly consonantal and much of their vocalism is derived. There are, however, many genuine irregularities; in particular, some suffixes happen to not mutate or lengthen particular stems, or they lengthen particular stems while reduplicating others, and to some extent we simply have to treat these as lexical properties of the resulting stems.

Appendix B

Morphology and syntax

B.1 Introduction

B.1.1 Morphology: Introduction

Kwak’wala is a morphologically very rich language; many things that take multi-word phrases or entire sentences to express in English are expressed using a single stem, with potentially numerous suffix-like elements attaching to a root to derive very specific meanings.¹

- (933) a. didagaʔeʔsdən
di-di-ga-ʔeʔsd=n
REDUP-tea-consume-want=1
“I want to drink tea.”

¹Kwak’wala is frequently described as “polysynthetic”, although depending on the definition it may or may not be. For example, it is probably best to characterize Kwak’wala person-marking particles as enclitics – that is, as syntactically separate words that are pronounced as if they were part of the previous word – rather than as inflectional suffixes. If “polysynthesis” requires, at minimum, the inflectional specification of sentential participants on the predicate, as in definitions along the lines of Baker (1996), then Kwak’wala probably does not qualify as “polysynthetic” in this sense; it is better, syntactically, to characterize Kwak’wala “inflections” as syntactically separate words enclitically dependent on the previous word, whether or not it is the predicate.

My own characterization of Kwak’wala would lean closer to “agglutinative”; stems are such that quite complex meanings can be expressed by the progressive addition of suffixes, but in which there is no particular morphological requirement regarding the inflection of predicates.

If “polysynthetic”, on the other hand, indicates that words are morphologically very complex, particularly when the corresponding parts correspond to independent words in other languages, as it is in definitions along the lines of Anderson (1985), then Kwak’wala is certainly “polysynthetic” in this sense.

b. kʷiʔkʷəʔtoli
 kʷy-kʷə-ʔto-l=i
 REDUP-sit-in.tree-ONGOING=3DIST
 “They are sitting in a tree.”

c. nugʷabuʔaʔcimas Mike
 nugʷa-buʔa-ʔcimas Mike
 be.1-pretend-should Mike
 “I am supposed to be pretending to be Mike.”

The most notable morphological feature of Kwak’wala (and all its Wakashan relatives) is its extensive collection of suffixes, many of them (the “lexical” suffixes) having very specific and concrete meanings (§B.3). In some words, the root itself contributes little or no meaning to the word, while much of the “lexical” meaning resides in the suffixes.

Kwak’wala is also notable for its wealth of **enclitics** – short words that are pronounced as if they are part of the previous word. These often look like suffixes, but we can observe that unlike suffixes they do not necessarily attach to the word they modify: they attach to whatever the previous word is. For example, =ʔ and =uʔs in (934) mark *liʔaʔola* (“relatives”) as accusative case and second-person possessive, but attach to the previous word, in this case *misəʔa* (“to smell”).

(934) *Context: Children are believed to be able to sense who their relatives are.*

misəʔaʔuʔs	liʔaʔola
mis-l=a=ʔ=uʔs	li-ʔaʔola
smell-ONGOING=A=ACC=2POSS REDUP-beloved	
“You smell who you’re related to.” (Lit: “[You] smell your relatives”.)	

Kwak’wala has several different classes of enclitics, which I examine in §B.4.

B.1.2 Syntax: Introduction

While Kwak’wala morphology is very complex, and can express many meanings that take multiple-word phrases or entire sentences in English, this does not mean that Kwak’wala syntax is correspondingly simple, or that there is less of interest to say about it.

Syntactically, the most striking feature of Kwak’wala is the extent of its “second-position” phenomena, in which elements that we would, ordinarily, expect to be in a structurally higher position instead occur after the first word of a lower phrase (Anderson, 1984). For example:

- It appears that some higher predicates – similar but possibly not identical to what Wojdak (2005) terms “affixal predicates” – occur as second-position enclitic-like elements *after* the first word of their apparent complements (§B.4.2).
- Clause-level elements like tense and clause-typing likewise occur in second position within the clause (B.4.3).
- Subjects, which we would, cross-linguistically, expect in a high structural position like the specifier of the tense head, also occur in second position (B.6.1).
- Various determiner-like elements occur, not before the argument, but in second position within the determiner phrase (B.4.4).

Overall, there are potentially several dozen predicates, particles, or grammatical roles that have this property, in which a structure that we would expect to have the syntactic and semantic structure in (935a) is linearized as (935b).

- (935) a. [X [Y Z]]
 b. Y X Z

Given the diversity of elements that have this property, disentangling what is going on at phonological spell-out would be a substantial investigation in itself, and crucial for further morphosyntactic work on Kwak’wala. However, for the purposes of this investigation, I am going to assume that, for each of Kwak’wala’s “second-position” linearization anomalies, something like Wojdak’s (2005) “PF incorporation” – incorporation by head movement at PF – is happening at the level of phonological form, to result in a linearization along the lines of (936b), and that the semantic interface is still evaluating logical forms along the lines of (936a).²

- (936) a. [=çimas [=buła [nug^wa Mike]]]
 b. nug^wabułaçimas Mike

²This conflation of what are probably rather different phenomena is very likely to be an oversimplification, but it will suffice for this investigation, in which I need, at minimum, to make *some* assumption about the relative scope of elements.

Further questions, like to what extent the “mirror principle” (Baker, 1985) holds of these phenomena, I will have to set aside for future investigation. Impressionistically, it seems that a mirror principle holds between some elements but not others; it would seem to hold between the predicate-modifying enclitics (§B.4.2), but assuming it of the mass of second-position “clausal enclitics” would, I think, result in some structural contradictions.

Therefore, I will not be assuming *a priori* that anything further to the right in the second-position space is necessarily in a higher structural position compared to elements further to the left. In other words, while I will assume for a linearization [A=X=Y=Z B] that X, Y, and Z out-scope A and B, I will not necessarily assume that this gives us evidence regarding the relative scope of X, Y, and Z.

Although there would need to be, as Wojdak (2005) points out, differences in how Kwak'wala and Nuuchahnulth would have to be linearized, overall an account along Wojdak's general lines seems to me inevitable if we want to maintain a compositional semantics for Kwak'wala at all.

It is important, however, when considering Kwak'wala syntax to draw a clear demarcation between this sort of PF movement – utilized in order to express a mapping between a linearization of a sentence and a reasonably hierarchical logical form – and movement in the more traditional A and A-bar sense as discussed in Levine (1984) and Anderson (1984): movement that accounts for the relationship between the overt expression of an argument and its trace, movement that is posited to underlie the interpretation of relative clauses, etc. While PF movement in Wojdak's sense is ubiquitous in Kwak'wala, movement in this latter sense is, at best, very restricted.

There are only two argument types that can “move”, in this latter sense. In general, the only argument that moves is the subject – or, stated more generally, when an argument occurs displaced from the point at which it is interpreted, it will, except in certain special cases, be the subject. Only one kind of argument, the subject, exhibits variable positioning within a sentence³, and various syntactic phenomena for which we might want to posit a movement basis (relativization, questioning, clefting) are, in ordinary predicative sentences, all limited to subjects.

In this way Kwak'wala is similar to Malagasy (Keenan, 1976): various phenomena are only able to pick out subjects, and for arguments that would not ordinarily be subjects there are a variety of voice-like affixes that allow the expression of that argument as a subject. This property had led syntacticians studying Malagasy (e.g. Keenan, 2008) and Kwak'wala (e.g. Levine, 1984) to posit that perhaps these languages lack movement altogether, and suggest that all transformation can be handled in the lexicon by deriving predicates with the appropriate subcategorization frames. I observe in §B.3.4.1 that some Kwak'wala “passives” seem to be created in the lexicon, but some seem to be post-lexical, and therefore I do not adopt an entirely movement-free syntax for Kwak'wala. Rather, I assume that “A” movement is possible (and free enough to allow the passivization of a variety of arguments), while “A-bar” movement is limited to subjects.

In more theory-neutral terms, this would amount to the following: the structural subject of a predicate might be in various semantic relationships with it, either because that predicate inherently has a particular role as its subject (as with the “lexical” passives), or because the

³There are various means of expressing objects within a sentence – as \check{x} or s objects, as prepositional phrases, as appositives – but the only argument that has the same morphological expression and occurs in different positions within the sentence is the subject.

subject is interpreted as originating in another argumental position (as with the “syntactic” passives). However, apparent subjects utilized elsewhere in the sentence must be interpreted as the subject of the lower predicate.

However, Sherer (2014) finds sentences in which it appears that some non-subjects move, in particular some locative and locative-like arguments. The phenomenon that she encounters is systematic, and therefore poses a problem for accounts in which only subjects can move, but it is also fairly limited in its distribution. I look at it in more detail in §4.4.⁴

B.2 Roots

Most roots⁵ in Kwak’wala are monosyllabic. There are various roots that consist only of a single consonant (e.g. *l-* “to go”, *d-* “to take in hand”, *k’w-* “to sit”), but most roots also contain a nucleus consisting either of a vowel or a plain resonant (§A.2.1.1) (e.g. *čw-* “to give”, *bw-* “to go”, *cy-* “to draw water”), and most roots also have a non-resonant coda, possibly complex.

Most roots (and most suffixes for that matter) have as their final segment a “plain” consonant (§A.2.1), one of *p, t, λ, k, kʷ, q, qʷ, s, ł, x, xʷ, ʃ, xʷ, m, n, l, y,* or *w*.⁶ Morphological phenomena are usually sensitive to the last segment of a stem; for example, stems that end in ejective stops and affricates induce special mutation patterns.⁷

There are only a few polysyllabic stems that do not appear to be made up of roots and suffixes, and for which no shorter “root” form appears, such as *migʷat* (“seal”), *ɬale* (“to search”), and *məsiʔqʷ* (“sea urchin”).⁸ Boas et al. (1947, p. 310) note at least one suffix –*ṛha* (“try”) – which we would expect to pick out a monosyllabic root from a complex stem, but for these stems it does not: *mamigʷata* (“try to get seals”) and *maməsiqʷa* (“try to get sea urchin”), suggesting that *migʷat* and *məsiʔqʷ* really are just roots.

⁴While this special locative movement is of particular importance to the debate on Kwak’wala movement, it does not figure in any of the focus examples I am concerned with. It primarily (possibly exclusively) occurs in one type of copular sentence, whereas focus expression utilizes a different type.

⁵It should be noted that what we would now call “roots”, Boas called “stems”.

⁶There are few if any roots that end in *c*. It may be, since the mutations of *c* would probably have been identical to the mutations of *s*, that *c* roots were reanalyzed as *s* roots (§A.7.1.2).

⁷However, a few suffixal phenomena (like stem lengthening by the suffix *-was* “place”) might be sensitive instead to the final segment of a *root* even if other material intervenes (§B.3.4.10).

⁸Boas (1911) also counts *gəluλ* (“steal”), but this is probably *gəl-* (“crawl, move on all fours”) and *-wλ* (“obtain”), roughly “obtain by crawling”.

B.2.1 “Empty” roots

In Kwak’wala there are several roots that could be described as “empty” or “dummy” roots, that seem to have little semantic contribution to the stem. As seen in §B.3, many suffixes have specific and concrete meanings. “Empty” roots are used whenever one wants to express the meaning of these suffixes (or strings of suffixes) without the greater specification afforded by the root – to express “wanting” without specifying what one wants to do or be (937), or “pretending” without indicating what one is pretending to do or be (938). In a sense, they express the hypernym of all stems built on those suffixes.

(937) a. **ʔəḵ** ʔeḵsd

ʔḵ-ʔeḵsd

do-want

“to want”

b. **miḵ** ʔeḵsd

miḵ-ʔeḵsd

sleep-want

“want to sleep”

c. **gəla**ʔeḵsd

gla-ʔeḵsd

bear-want

“want to be a bear”

(938) a. **ʔobuła**

ʔwa-buła

so-pretend

“to pretend”

b. **miḵ** abuła

miḵ a-buła

sleep-pretend

“to pretend to sleep”

c. **gəla**-buła

gla-buła

bear-pretend

“to pretend to be a bear”

These roots do appear to have some meaning, however bleached, or at least a morphological restriction regarding what sorts of words are built from them. The root λw tends to be used to express parts of things and extents of space (“land”, “property”, etc.); as Nicolson (2013, p. 79) observes, “If one surveys the application of the u-[a’w] stem across word glosses a pattern begins to emerge of spatial or locative character.” It also appears in words dealing with truth (in the sense of being-the-case rather than getting-things-correct) – it is the root for λuq^w - (“believe”), λol - (“be true, be so”), $\lambda olak\acute{a}l$ - (“really, truly”), and $\lambda obul$ - (“pretend”). It is also the root on which the predicative-associating “only, just” (§7.3.4) is based. The semantic core of λw - strikes me as something like “just so” or “to just such an extent”; I gloss it, for lack of a better English equivalent, as “so”.

Those stems that deal with other states and actions – and the places they occur, the tools used, etc. – tend to use $\lambda \acute{x}$ - instead; I gloss this as “do”, for lack of a more exact English counterpart.

The contrast between $\lambda \acute{x}$ - stems and λw - stems can be seen in pairs like the following:

- (939) a. $\lambda \acute{x}$ abud
 $\lambda \acute{x}$ -abw-d
do-under-CHANGE
 “put something under something” (FirstVoices, 2009)
- b. λw aboy
 λw -abw-ay
so-under-NMZ
 “below, underneath”

Movement words tend to have hypernyms built from l - (“go”), although l - is likewise sometimes “empty” in the above sense, in that the l - hypernym does not always have to involve movement. For example $lo\lambda$ - (“get”, literally “obtain by going”) is the hypernym of the various verbs of obtaining ($gayu\lambda$ “get from”, $g\acute{a}lu\lambda$ “steal”, $ki\lambda$ “to fish by net”, $h\acute{a}n\lambda$ “to hunt”, etc.), but while it is built on “go”, it is used whether or not the obtainer has gone anywhere.

B.2.2 Interrogative and indefinite roots

There is also a set of interrogative roots that form the predicates of interrogative sentences; these include $\lambda \acute{a}ng^w$ - (“who”), $g\acute{a}ns$ - (“how many”), and the semantically rather general interrogative roots $\acute{m}a$ (used for several varieties of “what”) and w^y - (used for a wide variety of question stems). The syntax of interrogative-stem sentences will be considered in more detail in §B.7.2.

(940) ʔəng^wuǰda bəg^wanəm?
 ʔng^w=uǰ=da bk^w-_wanm?
 who=3_{MED}=DET man-person
 “Who is that man?” (Lit: “That man is-who?”)

(941) məcaλuǰ
 məcaλ=uǰ
 what=3_{MED}
 “What is that?” (Lit: “That is-what?”)

*w*y- is the root of a wide variety of interrogative stems; various lexical suffixes such as -*ʔstw* (“eye, color”) and -*k_h-la* (“sound”) can attach to *w*y- to form quite specific question words.

(942) wⁱʔstu
 w^y-ʔstw
 WH-eye
 “what color”

(943) wⁱkala
 w^y-k_ha-la
 WH-sound-ONGOING
 “what sound”

Also, Kwak’wala has a set of “indefinite” stems based on ǰ^wy-, directly parallel to the WH stems based on *w*y-.⁹ They have a distinctive syntax associated with their use, which I examine in §4.4.4.

(944) a. ǰ^wiǰəm-
 ǰ^wy-(ǰ)m-
 INDEF-face-
 “what [one] looks like” (cf. *wiǰəm-*, “what does [one] look like?”)

b. ǰ^wiʔstu-
 ǰ^wy-ʔstw-
 INDEF-eye-
 “what color [it] is” (cf. *wiʔstu-*, “what color is [it]?”)

⁹These might be ǰ^wy’- and w^y’, at least in some words.

- c. ḡ^wiks-
 ḡ^wy-ks-
 INDEF-manner-
 “what [one] is like” (cf. *wiks-*, “how is [one]?”)
- d. ḡ^wigil-
 ḡ^wy-gi-l-
 INDEF-do-ONGOING-
 “what [one] does” (cf. *wigil-*, “what is [one] doing?”)
- e. ḡ^wikal-
 ḡ^wy-(k)_ha-l-
 INDEF-sound-ONGOING-
 “whatever [one] sounds like” (cf. *wikal-*, “what [one] sounds like?”)
- f. ḡ^wiʔxu-
 ḡ^wy-ʔxu-
 INDEF-throat-
 “whatever [one’s] voice is like” (cf. *wiʔxu-*, “what [one’s] voice is like”)

There are also a few ḡ^wy- stems that do not seem to have interrogative counterparts, including ḡ^wenam (“product of labor”) from *-_wanəm* (“result, obtained by”) and ḡ^wela (“in whatever manner”, “in whatever dress”) from *-ala* (difficult to characterize, but roughly “continued position”).

ḡ^wy- stems are the basis for many abstract nouns in *-_was* (§B.3.4.10).

- (945) a. ḡ^wiʔstəw^{as}
 ḡ^wy-ʔstw-_was
 INDEF-eye-NMZ
 “color”
- b. ḡ^wigilas
 ḡ^wy-gi-l-_was
 INDEF-do-ONGOING-NMZ
 “behavior”, “achievements”

c. ǰ^wikd^zas
 ǰ^wy-ks-*w*as
 INDEF-how-NMZ
 “type, kind”, “feelings”

d. ǰ^wiʔxu^was
 ǰ^wy-ʔxu-*w*as
 INDEF-throat-NMZ
 “voice”

(FirstVoices, 2009)

B.2.3 Classifying roots

Many roots, especially those dealing with carrying, placing, throwing, and being in a particular orientation, are “classificatory”, in the sense that they classify their theme according to its shape (round, flat, long, hollow, etc.) and occasionally its number. Boas (1900, p. 720) notes “The classification of nouns and verbs in regard to their form is also found in words denoting existence. These have separate forms for round, long, flat, and soft objects.” For example, we find:

(946)	λ-	“long thing standing”
	ǰ ^w	“multiple long things standing”
	ṭ	“long thing lying”
	kat-	“long thing lying”
	ẉik-	“carry a long thing”
	lix-	“long and round”
	lux̣ ^w	“round”, also “to roll”
	ṃk-	“round thing sits/lies/is on”
	np-	“throw round thing”
	ṭix-	“carry a round thing on shoulders”
	ṃx̣-	“vessels on, put vessel on”
	hn-	“vessel sits, put vessel on”
	kaλ-	“throw flat thing”
	las-	“to push long or flat thing”

Some of these describe plural objects, while others take a special plural suffix *-m* when the theme is plural.

- (947) a. luḵ^wəmaḵa
 luḵ^w-m-aḵa
 round-PL-down
 “to roll down (plural)”

(FirstVoices, 2009)

B.3 Suffixes

Kwak’wala (and other Wakashan languages) have an exceptional variety of suffixes. Some of them express meanings that are expressed suffixally in many languages (like the desiderative *-ʔeḵsd* and the causative *-amas*), but many express meanings that in most languages are expressible only by roots. Some of these are very specific in meaning, like *-ḵλ* (“stern of a canoe”), *-ʔḵu* (“throat, voice”), or *-but* “pretend”.

These are sometimes termed “lexical suffixes” by analogy with a broadly similar class of suffixes in the neighboring Salishan languages, although “lexical suffixes” in Wakashan languages have a wider semantic range than Salishan lexical suffixes (Wojdak, 2003). Levine (1977) notes, however, that the lexical suffixes are not to be understood as being a discrete class of suffixes within the language itself:

The suffixes correspond to what, in Salishan languages, are called lexical suffixes, but such a label seems inadequate for a language like Kwak’wala. There is nothing particularly well-defined about these suffixes as a set *vis-a-vis* other sets. In terms of meaning they range from the extremely circumscribed to the most elusively general and abstract; some are highly productive, some are very widely distributed without being particularly productive; still others are restricted in their occurrence (Levine, 1977, p. 100).

It is worth noting that these root-suffix combinations, although both pieces may be concretely meaningful, are not synchronically “compounds” in the sense of “compounds of two morphological roots”, and are not obviously derived from compounds. Nearly all the suffixes appear to be etymologically unrelated to the roots that would be their equivalent.¹⁰ There are a few potential exceptions, collected by Boas et al. (1947, p. 224):

¹⁰This is interesting in that a root and suffix might nonetheless share the same polysemous range, like the root *ʔaλ* and the suffix *ʔak*, both of which serve to express a range of meanings related to “inland”, “forest”, and “behind”.

- (948)
- | | | | |
|--------------------------|-------------------------|-------------------------|-----------------|
| <i>q̇əs-</i> | “to eat meat” | <i>-qəs</i> | “to eat” |
| <i>ṗaq-</i> | “to taste” | <i>-ṗa</i> | “to taste” |
| <i>l̇aq^w-</i> | “to shout” | <i>-laq^w</i> | “to talk about” |
| <i>ẇat-</i> | “to lead (by the hand)” | <i>-ẇat</i> | “to carry” |

This last might also be related to the suffix *-ẇət* (“companion, fellow”), often used to indicate those who accompany one during an action. Another possible similarity is between the root *ṁut-* “feast leftovers, carry home food after a feast” and *-_rṁut* (“something leftover from an action, remains, refuse”), although these appear to have somewhat different connotations, with the latter carrying a meaning of “worthless” or “useless” that the former, so far as I know, does not.

Also, suffixes do not always “add” meaning to the stem or change the meaning of a stem. This observation is highlighted in Bach (2002), who emphasizes that the addition of “derivational” suffixes does not necessarily derive *new* meanings.¹¹

- (949) a. *pəgədʒu*
pk-_wdʒw
 flat-flat
 “flat object, flat surface”

Stems can (and often do) have several suffixes, and many apparent suffixes are actually complex and can be broken down into further suffixes.

- _waci* (“vessel, container, boat, building”)
 = *-_was* (“place”) + *-_hi* (nominalizer)
-_wilas (“building, place where one does something inside”)
 = *-_wil* (“on floor, indoors”) + *-_was* (“place”)
 (950) *-_widʒas* (“open area, field”)
 = *-_wis* (“on beach, shore”) + *-_was* (“place”)
-xdəmk̇ən (“uniform, clothes for an activity”)
 = *-xdəm* (“proper, appropriate, usual”) + *k̇ən* (“body, esp. surface of body”)
-(ġ)əml̇ (“mask, headgear”)
 = *-(ġ)əm* (“face”) + *-l̇* (nominalizer)

Some of these suffix combinations (like *-xdəmk̇ən*) have a more specific or concrete mean-

¹¹The word that Bach concentrates on is *q̇ayaʒiq̇ala* (“remember”), and notes that both the root and the suffix appear to mean the same thing (roughly “think”). However, the apparent corresponding word in Kwak’wala is *q̇iq̇əʒeq̇ala* (“to be worried” but also “to be busy”), suggesting that the stem might be *q̇y-* (“much, many”) plus *-_{rh}iq̇* (“thinking”, “in mind”, “internally”), giving us roughly “to have much on one’s mind”.

ing than we might predict from their parts, while others have a less specific meaning (like *-widʷas*, which need not be on a beach or the shore at all).

For some, like *-(ǰ)əmł*, only one of the components is obvious. It clearly has a subcomponent *-(ǰ)əm* (“face, head”); besides the similarity of meaning, it shares the morphophonological properties of *-(ǰ)əm*, and has a verbal counterpart in *-(ǰ)əm-d* (“put on face or head”, cf. *łətəmd* “put on a hat” vs. *łətəmł* “hat”). The second suffix, *-ł*, however, has no particular identifiable meaning except perhaps “nominal”.

B.3.1 Locative suffixes

A major category of Wakashan lexical suffixes deal with locations, both locations in the world (in the house, on the ground, on the beach, etc.) and parts of wholes (body parts, surfaces and points, etc.).

One of the most notable properties of Kwak’wala morphology – part of what Boas termed the “exuberant development of locatization” (Boas et al., 1947, p. 205) – is the way in which many actions are morphologically specified as to where they occur: in a house (*-wit*), on the ground (*-hs*), on the beach or on an underwater surface (*-wis*), on a rock (*-ha*), in water (*-łsta*), etc.

- (951) a. *wənił*
 wn-wit
 hide-house
 “to hide indoors”
- b. *łəmłəłs*
 łmł-gł-hs
 play-away-ground
 “to go play outside”
- c. *tič łsta*
 tiq-łsta
 fall-water
 “to fall in water”

This specification is also seen with parts of wholes.

(952) a. kuḵwsisʔid
 kuq^w-(x)sis-xʔid
 break-**foot**-CHANGE
 “to break one’s leg”

b. ʔəḵ **ilbe**ʔida ball laḵa waci
 ʔḵ-_w**ilb**-ay=i=da ball la=ḵa was-_hi
 do-**nose**-NMZ=3DIST=DET ball PREP=ACC dog-NMZ
 “There is a ball on the dog’s nose.” (Lit: “The ball is-on-nose at the dog.”)

These are not solely to specify the locations of actions, however; the places and their bases stand in a variety of semantic relationships. The root might describe an attribute of the location or part, for example, or indicate what the location or part does. In (953a), for example, the root describes the water itself; it does not mean that someone is cooling down while in the water the way that (951a) means that someone is hiding while indoors.

(953) a. kux^wsta
 kux^w-ʔsta
 cool.down-**water**
 “lukewarm water”

b. wədəʔsta
 wd-ʔsta
 cold-**water**
 “cold water”

c. dagənsisəla
 dagns-(x)sis-la
 stocking-**foot**-ONGOING
 “wearing socks”

d. ʔayaxsid^zeʔ
 ʔayak-(x)sis-_way
 kick-**foot**-NMZ
 “soccer boots”

- e. **məlməlxsis**
 ml-ml-(x)sis
 REDUP-white-foot
 “white shoes, or a person with white shoes”

In general, we can observe that location and part suffixes added directly to roots do not have consistent semantic effects; we cannot in general treat the suffix as fulfilling any particular thematic role with respect to an action denoted by the root.¹²

There are various metaphorical extensions of these suffixes. The suffix *-wis* extends, in the combination *-wid^zas* (*-wis-was*, “on beach place”), to various kinds of flat places including cemeteries (*dəgid^zas*), playgrounds (*ʔəmlid^zas*), soccer fields (*qay^zagid^zas*), and airports (*pəlid^zas*). The suffix *-ha* (“rock, on rock”) extends to modern stoves, as in *həna* (“container sitting on a stove”). *-wit* means both in a house and on/onto a floor, and can sometimes mean something like “downward to a table” or other flat surface, as in the word used when talking about dealing cards, *ʔəxalit* (literally “put on the floor”).

There are also location suffixes that indicate motion into or onto something, that differ from their non-motion counterparts, like *-wił* (“into house”) instead of *-wit* (“in house”), and *-gəʔales* (“onto roof”) instead of *-(g)es* (“on roof”).

B.3.2 Classifying suffixes

Like roots (§B.2.3), some suffixes also classify by shape or class, for example.

- | | | |
|-------|--------------------------|-------------------------------------|
| | <i>-xsa</i> | “flat thing” |
| | <i>-s(ǧ)əm</i> | “round thing” |
| (954) | <i>-cəq</i> | “boat, long thing” |
| | <i>-wik^w</i> | “people, sometimes animals as well” |
| | <i>-huʔx^w</i> | “value, worth” |
| | <i>-ba</i> | “end of long horizontal object” |

These are often added to numbers as numeral classifiers, although numeral classifiers are not (in my experience) particularly common in contemporary speech aside from the person classifier *-wik^w*.

¹²We can make a parallel observation regarding “voice” morphology (§B.3.4). Although the addition of voice morphology to full verbal stems results in predictable semantic effects, the addition of voice morphology to roots, and other stems that are not already verbs, results in stems whose meanings cannot be predicted.

(955) a. $\dot{n}\acute{a}muk^w$
 $\dot{n}m\text{-}^wuk^w$
one-person
“one person”

b. $\dot{n}\acute{a}m\acute{c}\acute{a}q$
 $\dot{n}m\text{-}\acute{c}q$
one-long
“one boat”

(Powell et al., 1981a, p. 33)

B.3.3 Verbal suffixes

There are two main suffixes (or classes of suffixes) that derive verbal meanings in Kwak’wala, *-la* (roughly, ongoing state or action) and *-xʔid* (roughly, change of state). It is probably best to call these “aspectual” suffixes, although it should be emphasized that these do not seem to be inflectional, as such; they occur in the stem within other derivational suffixes, and are less predictable in their distribution and their semantics than casual inspection might suggest.

These are not the only such suffixes; there is also an apparently parallel set dealing with motion and position, *-ala* for continued position and a set of suffixes *-gəl*, *-gaʔl*, *-wəl*, and *-^wgəl* for change of position (indicating, respectively, away from, towards, out of, and being or remaining in motion). Which set of suffixes occurs, state/action or position/motion, seems to depend in part on the stem (*kʷ-*, “sit”, for example, tends to take the latter).

-la is usually [-əla], but is [-la] after vowels, and [-ala] after resonants and after most CC-stems. It is used for ongoing states and actions “that imply multiplicity, repetition or continuance” (Boas et al., 1947, p. 306); Greene (2013) treats it as a fossilized pluractional suffix.

(956) a. $duq^w\acute{a}la$
 $duq^w\text{-}la$
see-ONGOING
“to see”

b. $\check{x}^w\acute{a}nala$
 $\check{x}^wn\text{-}ala$
shiver-ONGOING
“to shiver”

c. **wəɖala**

wd-ala

cold-ONGOING

“(of weather or environment) to be cold”

-la is a very frequent component of other verbal suffixes, such as *-gila* (“to do or make”), *-(k)_hala* (“to sound like”), *-ksila* (“to do an activity, to occupy oneself with”), *-ewylɛla* (“to go back and forth, to go around”), etc. The [a] ending of *-la* (and of suffix combinations built on it) is probably the [a] we see on the citation forms of predicates; the [a] is generally not present when “true” suffixes follow (cf. §B.4).

It should also be noted that the contribution of *-la* to its stem is not always transparent; for example, the addition of *-la* to *cy-* (“to draw water”) results in *cela* (“to bail water from a boat”); while this meaning is understandable, it is more narrow in its meaning than just “to continuously draw water”. The addition of *-la* to “taste” stems in *-pa* (like *yaxpa*, “to taste bad”) systematically results in “smell” stems (like *yaxpala*, “to smell bad”). *-la* also occurs in a number of apparently nominal stems, generally having to do with multiplicity, like *kutala* (“salmon, fish”), *q^wax̄ala* (“forest”, from *q^wax̄*, “tree, grow”), and *guk^wəla* (“village” from *guk^w*, “house”). This process is not synchronically productive, however.

-xɬid and its variants [-nd], [-ud], and [-d] (the choice of which seems to depend primarily on what other suffixes occur in the stem) have two main uses.¹³ Greene (2013) describes in detail the “intransitive” use of *-xɬid*, which derives inchoatives from stative stems.

(957) a. **ʔəlsɬid**

ʔls-xɬid

fat-CHANGE

“to get fat” (cf. *ʔəls-* “to be fat”)

b. **lawisɬid**

lawis-xɬid

angry-CHANGE

“to get angry” (cf. *lawis-* “to be angry”)

-xɬid is also used to create transitive stems, but what meaning if any it contributes is unclear. The Kwak’wala textbook series (Powell et al., 1981f, p. 15) seems to treat it as just a marker of transitivity: “the ‘-’id-’ word part means that the action of the sentence is being done to something or someone.”

¹³There is an additional use of *-xɬid*, later in the stem, as a recent-past tense marker (Greene, 2013), but I have not encountered this.

(958) a. təp̄id
 tp-xʔid
 break-CHANGE
 “to break something”

b. həməxʔid
 hm-xʔid
 eat-CHANGE
 “to eat something”

A distributional distinction that might shed light on the function of *-xʔid* can be observed in the contextual differences between *həməxʔid* and *həməp̄*.¹⁴ Both are transitive, but my sense is that *həməxʔid* tends to be used when the fact that the object was eaten is in some way important: when we are talking, for example, about a specific fish and what happened to it (959-960). On the other hand, *həməp̄* seems to be used somewhat more like “dine”, and tends to be used when we are talking about dining habits (961-962).¹⁵

(959) *Context: Katie caught a fish, then Pat ate it.*

ləməuḥ	Pateḥ	həməxʔi	ḥa	ḵutəla	loʎanəms	Katiy
l=ʔm=uḥ	Pate=q	hm-xʔid	ḥa	ḵutla	loʎ-wanm=s	Katiy
then=VER=3MED	Pat=VIS	eat-CHANGE	ACC	salmon	get-obtained=3POSS	Katie

“Then Pat ate the fish that Katie caught.”

(960) *Context: A fish goes missing and the feast organizers are investigating.*

gəngənanəḥ,	həməxʔida=s	ḥa	ḵutəla?
gn-gn-wanm,	hm-xʔid=a=s	ḥa	ḵutla
REDUP-young-person,	eat-CHANGE=QUES=2	ACC	salmon

“Children, did you eat the fish?”

¹⁴The suffix *-ap* is unclear in meaning, but might have something to do with eating or drinking; I have encountered *supsap* (from *sups*, “soup”) as a humorous coinage meaning “to eat soup”.

¹⁵This same semantic difference can be seen in the Salishan languages, in the transitivizing morphology. Those instances that are expressed in Kwak’wala with the *-xʔid* form are expressed in Salishan with formally transitive predicate and an object, whereas the other form is expressed with a formally intransitive predicate and an oblique argument (Henry Davis, p.c.).

(961) *Context: We had been playing guess-the-animal, and my animal had been the seal, and the turning-point clue had been that it eats fish. After I revealed and confirmed the answer, one speaker said:*

mig ^w at!	ʔixʔak	qeʔs	həmapεʔ	ǰa	ʔutəla
mig ^w at!	ʔixʔak	q=iʔs	hṃ-ap=a=aʔ	ǰa	ʔutla
seal!	like	for=3POSS.REFL	eat-consume? =POSS=INVIS	ACC	salmon

“A seal! He likes to eat fish!”

(962) *Context: In a storyboard, a proud cat refuses to eat cat food.*

həmapuǰ	Spencer	ǰa	ʔutəla
hṃ-ap=uǰ	Spencer	ǰa	ʔutla
eat-consume? =3MED	Spencer	ACC	salmon

“Spencer eats fish.”

My sense, then, is that transitive *-xʔid* is used when it is relevant that the object is undergoing change: the fish getting eaten, for example. (Put another way, the event is delimited by the change of state of the object, whereas forms like *həmap* would not be delimited in this way.) I therefore gloss *-xʔid* as just “change”: for intransitives, a change-of-state on the part of the subject, and for transitives, a change-of-state on the part of the object.

B.3.4 Voice suffixes

Of particular interest to the examination of Kwak’wala focus is a class of suffixes termed the “voices” suffixes (Sherer, 2014). Like Sherer, I use the term “voice” in an “extended sense, to denote the set of grammatical constructions which regulate the mapping of thematic roles to subject position” (p. 23). Although Kwak’wala syntax is highly “subject sensitive”, there exist a variety of suffixes that allow almost any participant in an event to be expressed as a subject.

Much of the Kwak’wala lexicon is organized in this way; this is acknowledged as early as Hall (1888a), who notes,

“Most of the Kwagiutl nouns are formed from verbs, e.g *ʔiʔakəla* is the verb “to work,” and from this verb we get the following nouns:– *ʔiʔakəlayu*, a tool... *ʔiʔakələʔinuǰ*“, a labourer or one skilled in labor... *ʔiʔakələlgis*, a servant... *ʔiʔakəlut*, fellow workman... *ʔiʔakəlanəm*, wages or what is gained by work, *ʔiʔakəlas*, place of work... *ʔiʔakəlaʔi*, workshop” (p. 63).

We can see this, for example, in the many forms based on the root *yq-* (“to knit”):

- (963) a. **yəǵək^w**
 yq-*w***k^w**
 knit-PART
 “something knitted”
- b. **yəǵayu**
 yq-*w***ayu**
 knit-INSTR
 “knitting needles”
- c. **yəqalas**
 yq-**alas**
 knit-material
 “wool”
- d. **yəǵaci**
 yq-*w***as-hi**
 knit-PLACE-NMZ
 “knitting basket (for holding yarn, etc.)”
- e. **yaqinuǵ^w**
 yaq-*h***inuǵ^w**
 knit-expert
 “expert knitter”

We might call all of these suffixes “passives”, or “nominalizers”, but they do not fall into any one morphological class, and do not all create “nouns” in the sense used in Chapter 3; some of these might be passives (in the A-movement sense), some are almost certainly nominalizers, and some may be both or neither. For this reason, I use “voice” as a catch-all term to refer to any suffix that, when added to a base that describes an event or state, creates a stem that refers to a particular participant in that event.

Given a stem, it is often predictable which participant it refers to, and given a participant, it is often predictable what forms the stem can take, but this cannot be counted on. Many such alternations seem to be lexically specified or irregular, and probably must, in the end, be treated as only semi-predictable relationships between lexical stems. Anderson (1984, p. 23), summarizing Levine (1980; 1981), puts it like so:

“Active sentences and their passive counterparts (of which there are often more than one in Kwakwala) are thus described not by a rule moving the object NP into

subject position, but rather by the choice of one or another member from a systematically related set of lexical items differing in their subcategorization frames (and also in the presence or absence of particular derivational suffixes).” (p. 23)

This may be putting it too strongly, however. There are at least two morphological “levels” at which voice suffixes attach, one of which results in the lexically-specified and only semi-predictable stems of the sort that Anderson and Levine seem to be describing, and the other of which forms more regular passive-like forms. Levine (1980) identified one of the key differences between the levels (regarding the presence of verbal morphemes), but did not tie this difference to a lexical/syntactic difference; he considers all Kwak’wala morphology (save for the obvious enclitics) to be derivational. I concur instead with Sherer (2014): that some “voiced” stems are derived lexically, whereas others represent post-lexical syntactic transformations.

B.3.4.1 “Lexical” and “passive” voice suffixes

As noted in §B.1.2, while Kwak’wala morphology is sufficiently rich that it can express much of what English does with syntax, we should not automatically assume that all of Kwak’wala morphology is “just syntax” in a different guise. This is particularly true when we consider the voice suffixes: some of these suffixes have the productivity and transparency we might associate with a syntactic passive, but for others, it would be problematic to consider them “passives” in the familiar sense of taking a particular grammatical role and promoting it to a subject.

In particular, it is difficult to maintain that each of Kwak’wala’s eight (or more) “voices” corresponds to a systematic transformation of a preadjacent active sentence. For one, Kwak’wala voice suffixes make more subtle semantic distinctions than are usually associated with distinct thematic roles or structural positions. Something transformed by an action can be marked with $-_w k^w$, something merely obtained by an action generally receives $-_w anəm$, and the stimuli of experience receive $-_w t$. We do not, however, have evidence of a corresponding structural complexity within the verb phrase; each of the relevant participants is ordinarily expressed as a \check{x} object.

- (964) a. $xəldək^w$
 $xlt-{}_w k^w$
 saw-PART
 “something sawed”

- b. xəltidida bəg^wanəm **ǰa** **λoʔs**
 xlt-xʔid=i=da bg^wanm ǰa λaǰ^w-ʔs
 saw-CHANGE=3DIST=DET man ACC stand-on.ground
 “The man sawed the tree.”
- (965) a. duǰ^wǰt
 duq^w-*w*t
 see-STIM
 “something seen”
- b. duq^wǰlən **ǰa** **wǰcibidu**
 duq^w-l=n ǰa wǰs-*h*i-bidu
 see-ONGOING=1 ACC dog-NMZ-DIMIN
 “I see a little dog.”
- (966) a. kəlwanəm
 klx^w-*w*anm
 buy-obtained
 “something bought”
- b. kəlx^wi Stacey **ǰa** **kutəla**
 klx^w=i Stacey ǰa kutla
 buy=3DIST Stacey ACC salmon
 “Stacey bought a fish.”

I should note also that it is not just that different verbs lexically select different passive suffixes. This is a conclusion that one might draw, because to some extent we can observe that sensory verbs often take *-w*t passives, verbs of obtaining tend to take *-wanəm* passives, etc. However, this does not characterize the lexicon as a whole; we can find instances where the various apparent “theme” passives (e.g. *-s^w*, *-wk^w*, *-w^t*, *-anəm*) can occur on the same verb. For example, the participant playing the “theme” role, and corresponding to the *ǰ(a)* argument, of the verb stem *gəluλ* (“steal”) can be expressed using several different such suffixes (967).

- (967) a. gəluλanəm
 gl-uλ-*w*anm
 crawl-obtain-NMZ
 “something stolen”

b. gəlulʔicuʔ
 gl-uλ-xʔid-sw̌
 crawl-obtain-CHANGE-PASS
 “what was stolen”

c. gəluləkʷ
 gl-uλ-w kʷ
 crawl-obtain-PART
 “a thing stolen”

(Boas, 1900, p. 719)

Examples like the ones in (964-966) and (967) pose a problem for the idea that particular suffixes are in a one-to-one relationship with particular thematic positions encoded structurally within a verb phrase. I think this is a reasonable assumption for *some* of the voice suffixes, but not for the entire set at once.

Levine (1980) offers arguments along similar lines that the “passive” *-wł* cannot be due to a syntactic transformation, highlighting one usage of *-wł*, to form stems meaning “affected (usually negatively) by X”.

(968) gəldʒəluxʷda ʔodʒuyǐǰ
 gls-wł=ux̌=da ʔos-w uy̌=q
 paint-STIM=3MED=DET wall-NMZ
 “The wall was [over]painted” (that is, had gotten globbed up with paint, or got paint on it when it should have been bare) (Levine, 1980)

(969) tǐdʒəlida bəɡwanəma (sa tǐsəm)
 tǐs-wł=i=da bəɡwanəma (sa tǐs-m)
 rock-STIM=3DIST=DET man (OBL rock-NMZ)
 “The man was injured (by a rock).” (Rough lit: “The man was-rocked by the rock.”) (Levine, 1980)

He argues that these sentences cannot be treated as transformations of a corresponding active sentence, because the corresponding active sentences (which would mean something like “The man overpainted the wall” or “The rock rocked the man”) do not exist at all. For example, an oblique argument meaning “by the man” cannot occur as an argument to (968), the way it would in an ordinary passive sentence, the stem *gəls-* in its active use only means “paint”, not “paint excessively”, and the stem *tǐs-* in (969) does not have an active verbal use at all.

Even if we did posit an unusually rich inventory of semantically distinct structural positions, one for every voice suffix, it would not give us the actual distribution of these suffixes. The

semantic relationship between the base stem and the resulting stem is not always the same semantic relationship.

-_wayu, for example, is one of the most productive suffixes in the language, and can be added to nearly any stem to indicate, ordinarily, the instrument associated with a particular action. We might, therefore, propose that every *-_wayu* stem is actually a headless relative clause, derived from a VP with a (null) instrumental argument, meaning “the [one] with which one *X*’s”. However, while *X-_wayu* often does mean “instrument used for *X*”, it also means “instrument that is itself *X*” (970), “instrument made of *X*” (971), “instrument that *X*es” (972), “instrument that you do *X* to” (973), “instrument that causes something else to be *X*” (974), or “instrument associated with an *X*” (975).

(970) *linayu*

lix-_wayu

long.round-INSTR

“rolling pin”

(971) *həbeyu*

hbs-_wayu

fur-INSTR

“paintbrush”

(FirstVoices, 2009)

(972) a. *q̇əgayu*

q̇k-_wayu

bite-INSTR

“spring loaded trap used for small animals” (lit: “instrument that bites”)

(Grubb, 1977)

b. *q̇əx̃ʔənaʔayu*

q̇k-(k̇)n-aʔ-_wayu

bite-body-NMZ-INSTR

“clothes pin” (rough lit: “instrument that bites clothes”)

(FirstVoices, 2009)

(973) a. *q̇^wəḡayu*

q̇^wq-_wayu

turn.on.light-INSTR

“flashlight”

- b. k^wəmdayu
 k^wmt-_wayu
 suck-INSTR
 “cigarette”
- (974) a. çəliğayu
 çliq-_wayu
 shiny-INSTR
 “polish, anything used to shine another object” (FirstVoices, 2009)
- b. λuğ^wayu
 λuq^w-_wayu
 bald-INSTR
 “hair clippers” (FirstVoices, 2009)
- (975) a. ʔawayu
 ʔax^w-_wayu
 foam-INSTR
 “skimmer” (a tool used during eulachon grease production)
- b. k^wilayu
 k^wil-_wayu
 feast-INSTR
 “large feast spoon” (FirstVoices, 2009)
- c. bada^yu
 bad-_wayu
 butter-INSTR
 “butter knife”

These do not all represent the “instrument” role in some preajacent sentence – some are themes or patients, some are agents (of a sort), and some are not built on event stems at all – and would lead to awkwardness if they were all considered uniform derivations from a preajacent sentence.

Furthermore, the converse likewise holds, that not every instrument used for *X*-ing is an *X*-_wayu. Some instruments, although they might be in the appropriate “instrument” role, take suffixes other than -_wayu, like the instruments in (976) below, which take -_waçi due, presumably, to their shape or their being containers. That is to say, factors other than the *thematic* relationship

influence which suffix occurs.

- (976) a. $\dot{m}\acute{o}ny\acute{a}\acute{c}i$
 $\dot{m}ns\text{-}_w\text{as-}_h\acute{i}$
measure-PLACE-NMZ
“measuring cup” (cf. *m\acute{o}nyayu*, “ruler or tape measure”) (FirstVoices, 2009)
- b. $\dot{m}uda\acute{c}i$
 $\dot{m}ut\text{-}_w\text{as-}_h\acute{i}$
take.leftovers-PLACE-NMZ
“container for food taken home after a feast” (FirstVoices, 2009)
- c. $\acute{w}a\check{x}\acute{a}\acute{c}i$
 $\acute{w}a\check{x}\text{-}_w\text{as-}_h\acute{i}$
smoke-PLACE-NMZ
“pipe” (Boas et al., 1947, p. 319)

For other verbs, the corresponding instrument nouns are derived with -_wm , a nominalizer with many other uses as well (§B.3.4.6).

- (977) a. $ki\lambda\acute{e}m$ (* $ki\lambdaayu$)
 $ki\lambda\text{-}_wm$
net.fish-NMZ
“fishing net”
- b. $\text{ʔ}\acute{e}ml\acute{e}m$ (* $\text{ʔ}\acute{e}mlayu$)
 $\text{ʔ}\acute{e}ml\text{-}_wm$
play-NMZ
“toy”
- c. $\check{x}\acute{e}\check{g}\acute{e}m$ (* $\check{x}\acute{e}\check{g}ayu$)
 $\check{x}q\text{-}_wm$
to.comb-NMZ
“a comb” (FirstVoices, 2009)

In all, it is not completely predictable from the *role* of a participant what the corresponding stem will be, nor is it predictable from the form of the stem which participant the stem will refer to.

There is, however, a very important exception to the above: for most stems, when the voice suffix follows verbal suffixes like $\text{-}la \sim \text{-}ala$ and $\text{-}x\text{ʔ}id \sim \text{-}nd \sim \text{-}ud \sim \text{-}d$ (§B.3.3), then the form-

meaning correspondence is largely predictable, and these voice suffixes are good candidates for being “passives”. In other words, in the examples above, the voice suffixes were added to stems *instead* of verbal suffixes. If, on the other hand, we consider *-sṵ*, which is added to stems that are already verbal, or consider usages of *-_wayu* when it is added to stems that are already verbal, the resulting meanings are not very much like those above: they are transparent and predictable in meaning, they are almost completely productive, the shape or cultural category of the entity does not seem to be a factor, and other arguments of the stem remain.¹⁶

- (978) **sup**isəwida ləq^wa
sup-xʔid-sṵ=i=da lq^wa
chop-CHANGE-PASS=3DIST=DET WOOD
 “The wood **was chopped** with an axe.”

- (979) m̄acaliʔs ʔəḥʔeḥsdəsəwəʔoʔs
 m̄as-_hał=iʔ=s ʔḥ-ʔeḥsd-sṵ=a=uʔs
 what-kind=3DIST=2POSS **do-want-PASS=INVIS=2POSS**
 “What do you want?” (Lit: “That which **was wanted** by you is-what?”)

- (980) m̄asi t̄əp̄idayusuḥ Pateḥ ḥa k̄^wəʔsta
 m̄as=i **tp-xʔid-ayu**=s=uḥ Pate=q ḥa k̄^w-ʔsta
 what=3DIST **break-CHANGE-INSTR=3POSS=3MED** Pat=VIS ACC sit-in.water
 “What did Pat break the cup with?” (Lit: “That which **was used to break** the cup by Pat was-what?”)

- (981) la ʔəḥʔicəwida ʔəmgayuwe
 la ʔḥ-xʔid-sṵ=i=da ʔamk-ayu=e
 then do-CHANGE-PASS=3DIST=DET split.with.wedge-INSTR=INVIS?
 qaʔs t̄əlx^wʔidayuεʔ laq
 qaʔ=s t̄əlx^w-xʔid-ayu=a=aʔ la=q
 for=3POSS **beat-CHANGE-INSTR=POSS=INVIS** PREP=ACC.3
 “now is taken the wedge and it **is used for beating** on it.” (Boas et al., 1947, p. 312)

¹⁶To be precise about what “predictable” means, I would clarify that it is not as if “lexical” *-ayu* results in entirely unpredictable meanings, and “passive” *-ayu* results in predictable meanings. Rather, both are predictable and unpredictable in different ways. For example, for a “lexical” *-ayu* stem, one can infer that it refers to some sort of instrument, but the relationship between that instrument and the corresponding stem is unpredictable. On the other hand, for a “passive” *-ayu* stem, the referent could be any sort of thing, but the relationship between it and the corresponding verbal stem is predictable.

It is important to note that the participant indicated by these *-ayu* stems need not be an instrument, the way lexical *-_wayu* stems are; they just correspond to a particular argument (the *s(a)* argument), even if this cannot be conceptualized as being an instrument or being in an instrumental role, as in (982).

(982) a. *ləm̩is* Masaki *gəlulʔe*
l=ʔm=is Masaki *gl-uλ-xʔid*
 then=VER=and Masaki *crawl-obtain-CHANGE*
 “And then Masaki stole...”

b. ... *ǰa keʔgəsilayuwεʔs* Hannah
 ... *ǰa keʔgs-gi-l-ayu=a=aʔ=s* Hannah
 ... ACC *cake-do-ONGOING-INSTR=a=INVIS=3POSS* Hannah
 “...the cake that Hannah made.” (lit: “that which **was cake-made** by Hannah”)

So, returning to the question of whether Kwak’wala “voices” are lexical word-formation processes or syntactic transformations, I would not adopt either extreme, but say rather that there are two rough classes of voice suffixes, “lexical” and “passive”.¹⁷

“Lexical” voice suffixes:

- are usually added where verbal suffixes like *-la* and *-xʔid ~ -nd ~ -ud ~ -d* would be. (That is, they are added instead of verbal suffixes.)¹⁸
- often describe properties of the object itself (that they are tools, or containers, or surfaces, or coverings, or debris, etc.).
- can describe participants that often stand in a variety of semantic relationships to their preadjacent stems – that is, they do not necessarily stand in any specific thematic or grammatical role to a verb stem – and can be added to non-eventive stems.

¹⁷While not every voice suffix, or each usage of a voice suffix, falls cleanly into one of these categories, the two ends of the spectrum can be clearly differentiated. *-_wl* (§B.3.4.5), *-_wk^w* (§B.3.4.4), *-_wm* (§B.3.4.6), and one use of *-_wayu* (§B.3.4.9) seem to fall into the “lexical” category; *-s^w* (§B.3.4.3), the other *-ayu* (§B.3.4.9), and *-gil* (§B.3.4.8) seem to fall into the “passive” category. I am hesitant to classify *-_wanə^m* (§B.3.4.7) and *-_was* (§B.3.4.10); these tend to occur instead of verbal suffixes, like “lexical” voice suffixes, but I am not sure whether the other prototypically “lexical” properties are true of them.

Katie Sardinha, who has independently found this same distinction, reports (p.c.) that *-as* appears to have both of these “lexical” and “passive” uses, much as *-ayu* does.

¹⁸This should not, however, be taken as a hard and fast rule, there are various stems (like *ʔiʔakəl-*), and stems based on *-gil* (“do, make”) in which *-l* is at least morphologically present, but derivations of them otherwise have the properties of these “lexical” voices.

- do not retain other arguments that the corresponding verb stem would have, beyond the expression of the agent as a possessor.¹⁹

On the other hand, “passive” voice suffixes:

- are added after verbal suffixes like *-la* and *-xʔid ~ -nd ~ -ud ~ -d*.²⁰
- do not restrict their subject to being of a particular type or shape.
- do not seem to be added to non-eventive stems.
- can retain other arguments of their corresponding verb stem.

The “passive” suffixes include at least *-sʷ* (the general passive), the passive variant of *-ayu* (instrumental), and possibly *-git* (reasons and benefactive)²¹.

We can see the difference clearly when we consider the “lexical” and “passive” forms of the “instrumental” suffix, since “lexical” *-_wayu* has so many special forms, while “passive” *-ayu* maintains a single form. In the “lexical” form in (983a), the instrumental suffix is added instead of a verbal suffix, and in this word has a special form, *-_wanu*.²² The resulting word means the instrument conventionally used for doing this action. Meanwhile, however, in (983b), we see that the instrumental suffix comes after the verbal suffix, and does *not* have that special form, and the resulting stem does not mean the instrument associated with plaiting.

¹⁹In a few cases I have had speakers accept constructed forms, but the judgments were hesitant and follow-up sentences suggested that they were unsure which cases or prepositional phrases were permissible, accepting any form produced. This suggests to me that knowledge of the lexical passive stems does not necessarily involve knowledge of their additional arguments, if indeed they have any. Since lexical passives are not built on verbal stems the way syntactic passives are, it may simply be that these forms lack verb-like subcategorization frames altogether.

Boas (1900, p. 718), however, may be suggesting otherwise, that all “verbal nouns” retain their arguments: “the series of verbal nouns are particularly remarkable. They are numerous, and in construction always retain their verbal character, governing the pronominal cases that belong to a verb.” It is not clear what class of stems he includes in “verbal nouns” here; they at least include stems based on *-inaʔ* (§B.3.4.12).

²⁰However, note that there are many verbs that lack such suffixes, like *cw-* (“give”) and *qas-* (“walk”), and for such verbs even these voice suffixes that occur directly on the root (e.g. *ʔoyu*, “to be given”, *qayayu* “to be taken on a walk”) might be “passive” in this sense.

²¹Sherer (2014) identifies *-git* as being anomalous in various ways, and we can observe an example of this in §B.4.2.

²²This is the form that *-_wayu* takes in stems that would take *-nd* as their change-of-state suffix instead of *-xʔid*, often ones with body-part suffixes like *-ik* (“back”).

- (983) a. $\acute{w}\acute{a}siganu$
 $\acute{w}s-ik-{}_w\text{anu}$
 belt-back-INSTR
 “belt” (cf. *wásigənd*, “put on a belt”) (Boas et al., 1947, p. 317)
- b. $k\acute{a}lgap\acute{o}ndayu$
 $k\acute{l}k-{}_w\acute{a}p-nd-ayu$
 plait-neck-CHANGE-INSTR
 “[of one’s neck] to be plaited” (Boas et al., 1947, p. 312)

Put another way, there happen to be two different morphemes (one a “lexical” voice, the other a “passive” voice) that attach to the stem at different derivational stages. In many verb stems, they both happen to have the realization [ayu], but in special cases like those in (983a) and (983b) we can see that they are actually different morphemes.²³

B.3.4.2 Other uses of voice suffixes

It should also be observed that many of the voice suffixes have irregular uses as “nominalizers” or “formatives” outside of the particular constructions detailed here, and so their presence in a word might not be an indicator that a particular participant in an event is being identified. *-anəm*, for example, is used to pick out the thing obtained by verbs of obtaining (like *kəlwanəm* “what was bought” from *kəlx^w* “buy”, or *kilənəm* “fish caught” from *kiλ* “fish with a net”), but it also forms nominal stems referring to people (984), in which no such meaning can be seen.

- (984) a. $b\acute{a}g^w\acute{a}n\acute{a}m$
 $bk^w-{}_w\acute{a}n\acute{a}m$
 man-person
 “man”
- b. $g\acute{a}n\acute{a}n\acute{a}m$
 $gn-{}_w\acute{a}n\acute{a}m$
 young-person
 “child”

²³By my reading of Boas et al. (1947), Boas seems to have known about these two separate uses of *-{}_w\acute{a}yu*. While he does not explicitly point out the difference, he writes about the lexical and passive uses of it separately; when he discusses it as a “passive” he uses examples with *-xʔid*. Furthermore, when writing about the passive use he indicates it as *-ayu* (which is how he indicates non-mutating suffixes) rather than *=ayu* (which is how he usually writes it, with the equals sign indicating a weakening suffix); as can be seen in (980-981) this “passive” *-ayu* does not appear to weaken the preceding consonant.

That is, although each of the forms detailed below can produce regular or semi-regular “participant in an event” readings, almost all of them also derive nominal forms outside of these patterns. The suffix $-_w k^w$, for example, is usually a participle but also forms names of various kinds of berries ($q\acute{a}m d^{\acute{a}}k^w$ “salmonberries”) and tribes ($n\acute{a}m s\acute{g}\acute{a}m\acute{a}k^w$ “one tribe”, $w\acute{i}w\acute{a}l s\acute{g}\acute{a}m\acute{a}k^w$ “all tribes together”, $k^w\acute{a}k^w\acute{a}k\acute{a}w\acute{a}k^w$ “Kwak’wala speakers”, $\rho u\acute{g}^w\acute{x}s\acute{a}m\acute{a}k^w$ “people from different tribes”). The suffix $-_w\acute{a}c\acute{i}$ usually refers to containers and vessels, but it also happens that various insects have names in $-_w\acute{a}c\acute{i}$, like $t\acute{u}p\acute{o}y\acute{a}c\acute{i}$ (“flea”) and $h\acute{a}m d\acute{a}l\acute{a}c\acute{i}$ (“bumblebee”).

B.3.4.3 $-s\acute{w}$

The passive suffix $-s\acute{w}$, realized as $-s\acute{o}w$ or $-su\acute{?}$ depending on whether a vowel follows or not, is the most frequent, and most semantically general, of the Kwak’wala voice suffixes. The $-s\acute{w}$ suffix promotes the $\acute{x}(a)$ object (what I call the “accusative” object) to the subject. Unlike the more specific “lexical” §B.3.4.1 voice suffixes, $-s\acute{w}$ is not in my experience limited to verbs of a particular semantic class, and the resulting stems do not necessarily refer to an object of a particular kind or shape.

(985) $sup\acute{i}su\acute{?}$
 $sup-x\acute{?}id-s\acute{w}$
 chop-CHANGE-PASS
 “was chopped with an axe”

(986) $\acute{?}\acute{x}\acute{?}\epsilon\acute{x}s d\acute{e}su\acute{?}$
 $\acute{?}\acute{x}-7\epsilon\acute{x}s d-s\acute{w}$
 do-want-PASS
 “was wanted”

The $-s\acute{w}$ passive form is not necessarily blocked by the existence of a more specific passive (Sherer, 2014). For example, the “stimulus” passive of $mis-$ (“smell”) is $mid^{\acute{a}}\acute{o}l$ (“was smelled” or “something smelled”), but the $-s\acute{w}$ form is still sometimes encountered.

(987) *Context: I smell something unusual and cannot figure out what it is.*

a. $m\acute{a}c\acute{a}c\acute{a}c\acute{o}n$ $mis\acute{o}l\acute{a}s\acute{o}w\acute{?}\epsilon\acute{?}$
 $m\acute{a}s-_{h}\acute{a}c^{\acute{?}}=n$ $mis-la-s\acute{w}=a=a\acute{?}$
 what-??=1 smell-ONGOING-PASS=a=INVIS
 “What am I smelling?”

- b. m̥ac̥ac̥ən midʔəɬəʔ
 m̥as-_nac̥=n mis-_wɬ=a=aʔ
 what-kind=1 smell-STIM=a=INVIS
 “What am I smelling?”

Note that the two “voices” here are attached to stems at different stages of derivation, as noted in §B.3.4.1: *-s̥w̥* systematically attaches after verbal suffixes like *-la*, whereas *-_wɬ* attaches instead of them (cf. Levine, 1980).

When we compare sentences with *-s̥w̥* passives to the corresponding active sentence, *-s̥w̥* typically “promotes” the *x̥(a)* argument to subjecthood, but occasionally we can observe verbs that take an *s(a)* object having a passive in *-s̥w̥*. For example, *ʔəx̥əla* (a semantically fairly general verb that includes meanings like “wear”, “use”, or “have with one”) takes a *s(a)* object, but I have encountered *ʔəx̥əlasuʔ* as its passive.

- (988) ʔəx̥əlasuʔ
 ʔəx̥-la-s̥w̥
 do-ONGOING-PASS
 “was worn”

B.3.4.4 *-_wk^w*

Boas (1900, p. 719) describes it as “a passive participle and noun”, and Sherer (2014) calls it the “result of action” voice; added to an eventive root *X* it means something like “something that is/was *X*’ed”.

- (989) a. m̥əgək^w
 m̥k-k^w
 swallow-PART
 “pills”
- b. yəğək^w
 yq-k^w
 knit-PART
 “something knitted”

- c. ʔudək^w
 ʔut-_wk^w
 pierce.ears-PART
 “pierced ears” (FirstVoices, 2009)

When added to roots with noun-like meanings, *-k^w* means something like “having”, the same way the English participle can in words like “antlered” (990a) or “pebbled” (990c):

- (990) a. wəλək^w
 wʔ-_wk^w
 antler-PART
 “antlered”
- b. k̇idəg^wis
 k̇it-_wk^w-_wis
 grass-PART-on.beach
 “grassy field”, “grassy area at mouth of river” (rough lit: “grassed shore”) (FirstVoices, 2009)
- c. ṫidzəg^wis
 ṫis-_wk^w-_wis
 rock-PART-on.beach
 “stony or pebbly beach” (rough lit: “rocked shore”) (FirstVoices, 2009)
- d. k̇^widzək^w
 k̇^wis-_wk^w
 snow.falling-PART
 “have snow on it”, as of mountains (rough lit: “snowed”) (FirstVoices, 2009)

In some forms *-_wk^w* does not seem to weaken the preceding consonant.

- (991) a. q̇^wilək^w
 q̇^wil-_wk^w
 grind-PART
 “something ground up or crumbled” (FirstVoices, 2009)
- b. q̇ałək^w
 q̇ał-_wk^w
 braid-PART
 “braided hair” (FirstVoices, 2009)

After plain resonants and /a/, $-_w k^w$ is usually realized as $-ak^w$ instead.

- (992) a. $\dot{k}at\acute{o}mak^w$
 $\dot{k}at-(\check{g})m-_w ak^w$
 write-face-PART
 “picture, photograph” (lit: “face-drawn”)
- b. $mux^w s\acute{o}mak^w$
 $muk^w-s(\check{g})m-_w ak^w$
 tie-round-PART
 “something that has been tied up” (FirstVoices, 2009)
- c. $hawas\acute{o}wak^w$ ²⁵
 $hawasw-_w ak^w$
 sum-PART
 “added or counted together” (FirstVoices, 2009)
- d. $\text{ʔiʔkil}ak^w$
 $\text{ʔiʔkil}-_w ak^w$
 bless-PART
 “something or someone blessed or healed” (FirstVoices, 2009)
- e. $\text{li}\acute{x}s\text{ʔ}\acute{o}\text{ʔ}ak^w$
 $\text{li}\acute{x}s-(k)\text{ʔ}a-_w ak^w$
 advise-sound-PART
 “educated, someone who has been advised or taught” (FirstVoices, 2009)

B.3.4.5 $-_w \acute{t}$

The suffix $-_w \acute{t}$ has two main passive-like uses. One creates stems referring to the stimuli of verbs of experience (993) and attitude (994); Sherer (2014) terms this the “sensory stimulation” voice.

- (993) a. $du\acute{g}^w \acute{o}\acute{t}$
 $duq^w-_w \acute{t}$
 see-STIM
 “was seen, something seen”

²⁵Although it looks like a passive form, the corresponding verb *hawasud* shows that the *su* is not the passive, since it occurs before rather than after the *-d*.

- b. mid^zəł
 mis-_wł
 smell-STIM
 “was smelled, something smelled”
- c. p̣əyul
 p̣yx^w-_wł
 feel-STIM
 “was felt, something felt” (Boas et al., 1947, p. 212)
- d. məlǧ^wəł
 məlq^w-_wł
 remember-STIM
 “was remembered” (Hall, 1888a, p. 87)
- (994) a. mayaʔənl
 mayaʔx-_wł
 respect-STIM
 “respected” (Boas et al., 1947, p. 248)
- b. muł
 mǧ^w-_wł
 desire-STIM
 “desired” (Boas et al., 1947, p. 212)
- c. ʔid^zəl
 ʔis-_wł
 hate-STIM
 “hated” (Hall, 1888a, p. 87)

There is another use, which I have not encountered but is documented in Boas et al. (1947) and Levine (1980), which creates stems referring to those affected by outside forces (995).

(995) a. $\dot{t}id^z\text{ə}t$
 $\dot{t}is\text{-}_w\dot{t}$
 rock-STIM
 “injured by a rock” (Levine, 1980)

b. $l\text{ə}\check{g}^w\text{ə}t$
 $lq^w\text{-}_w\dot{t}$
 fire-STIM
 “affected by fire” (Boas et al., 1947, p. 377)

While there is a semantic commonality, between the two uses of $\text{-}_w\dot{t}$, of experience or affectedness, it is still important to note that these two uses treat their arguments differently; in (993) and (994), the subject is the thing causing the sense or feeling, while in (995) the subject is the thing affected.

B.3.4.6 -_wm

-_wm , added to a verbal stem, often indicates themes and patients of a particular sort, but has a wide variety of uses that are hard to capture under a single semantic generalization. In some ways it is the “elsewhere” nominalizer, forming nouns when a more specific nominalizer is not appropriate.²⁶

Various types of stems, however, regularly take their “passives” in -_wm . For example, attitude verbs like “worry”, “trust”, “fear”, “dislike”, etc. have passive-like counterparts formed with -_wm .

(996) a. $\dot{q}i\dot{q}\text{ə}\text{?e}\check{g}\text{ə}m$
 $\dot{q}i\text{-}\dot{q}i\text{-}_h i q\text{-}_w m$
 REDUP-much?-in.self-ONGOING-NMZ
 “what one is worried about”

b. $k\text{ə}l\text{ə}m$
 $k\dot{t}\text{-}_w m$
 fear-NMZ
 “be feared, what is feared”

²⁶Note, however, that there are indeed some forms (like those in 977) where another nominalizer would be, *a priori*, appropriate, but -_wm occurs instead.

- c. ǰənyad^zəm
 ǰənyas-_wm
 wonder-NMZ
 “to be wondered at” (FirstVoices, 2009)
- d. ǰəng^wəm
 ǰnk^w-_wm
 offended-NMZ
 “cause of fury or anger” (FirstVoices, 2009)
- e. ǰaxmudəm
 ǰak-mut-_wm
 bad-remains-NMZ
 “what is disliked” (FirstVoices, 2009)

Verbs of performance (and some other verbs dealing with abstract objects, like *liq-*, “to name”) have *-_wm* forms as well; when one sings, tells a story, or otherwise performs, the thing performed is indicated with *-_wm* (997).

- (997) a. saləm
 sał-_wm
 sing.love.song-NMZ
 “love song”
- b. ǰəmdəm
 ǰmt-_wm
 sing.to.baby-NMZ
 “song”
- c. nuyəm
 nus-_wm
 tell.legend-NMZ
 “story”
- d. ǰəkələm
 ǰkał-_wm
 tell.news-NMZ
 “story, rumor, news” (cf. *ǰəkələla*, “relate the news, tell a story”)

-_wm is also used to express the themes of verbs of movement, placement, giving, and leav-

ing; it generally indicates what was moved or given.

- (998) a. yağ^wəm
yaq^w-_wm
give.property-NMZ
“gift, present, a gift given at potlatch” (FirstVoices, 2009)
- b. həlağ^əm
hlaq-_wm
pay-NMZ
“payment”
- c. bux^wəld^zəm
bux^w-(ğ)əl-_hs-_wm
leave-change.pos-on.ground-NMZ
“to be left on the ground”, also “to be an illegitimate child” (FirstVoices, 2009)
- d. may^uləm
may^u-uł-_wm
bear.child-obtain-NMZ
“to be born” (FirstVoices, 2009)
- e. dəʔe^lə
d-_wił-_wm
carry-into.house-NMZ
“something taken into a house” (FirstVoices, 2009)
- f. q^wəlʔalid^zə
q^wl-ʔal-_wis-_wm
waves-towards-beach-NMZ
“to be washed ashore by waves” (FirstVoices, 2009)
- g. ýalağ^əm
ýalaq-_wm
send.someone-NMZ
“someone who is sent by another” (FirstVoices, 2009)

B.3.4.7 *-_wanəm*

The voice suffix *-_wanəm* forms stems referring to what is obtained by an action: what is caught, what is hunted, what is collected, etc.; Sherer (2014) terms these “obtained goods”.²⁷

- (999) a. *kəlwanəm*
kɪx^w-_wanəm
buy-OBTAINED
“something bought”
- b. *kiłanəm*
kił_w-_wanəm
net.fish-OBTAINED
“fish caught with a net”
- c. *ʔəniʔǰanəm*
ʔniʔq_w-_wanəm
gather.wood-OBTAINED
“firewood obtained”
- d. *didanəm*
did_w-_wanəm
borrow-OBTAINED
“something borrowed”

The hypernym of these is *lołanəm* (“obtained by getting”); like various other hypernyms based on *l-* (“go”) it does not seem to require that motion be involved.

B.3.4.8 *-gil*

The suffix *-gil* indicates reasons and motivations for doing something; it seems to consist of *-gi* (“do, make”) and *-_wl* (used for the stimuli of experience) (§B.3.4.5), which would make it literally something like “stimulus for doing”. One notable use of *-gil* is to allow the questioning of beneficiaries.

²⁷As noted in §B.3.4.2, *-_wanəm* is also used in many words describing people, such as *bəg^wanəm* (“man”), without any indication of an “obtained by” meaning.

- (1000) ʔəng^wiʔs kilx^wagiʔoʔs?
 ʔng^w=iʔ=s kilx^wa-giʔ=a=uʔs?
 who=3DIST=2POSS buy-reason=INVIS=2POSS
 “Who did you buy it for?” (Lit: “Your reason-for-buying was who?”)
- (1001) ʔəng^wasuǰda kəpiǰigiʔa
 ʔng^was=uǰ=da kəpiǰi-giʔ=a
 whose=3MED=DET gather-reason=A
 “Who are we gathering for?” (Lit: “The reason-for-gathering is-whose?”)
- (1002) məsiʔs ʔiyaxəlagiʔos
 məs=iʔ=s ʔiyax-la-giʔ=a=uʔs
 what=3DIST= work-ONGOING-reason=INVIS=2POSS
 “Who do you work for?” (Lit: “Your reason-for-working is-what?”)

-giʔ is most frequently encountered in *lagiʔ* (“reason”²⁸) (cf. §4.6.1).

- (1003) ʔəm, heṃən laɡiʔ likoǰ
 ʔm, he=ʔm=n la-giʔ liko=ǰ
 ver, be.3DIST=VER=1 go-reason borrow=ACC
 “Yes, that’s why I borrowed it.” (Lit: “My reason for borrowing it was that.” or “That was my reason for borrowing it.”)
- (1004) məsiʔs laɡiʔəʔoʔs he ǰ^wixʔidi
 məs=iʔ=s la-giʔ=a=uʔs he ǰ^wi-xʔid=i
 what=3DIST=2POSS go-reason=INVIS=2POSS be.3DIST whatever-CHANGE=3DIST
 “Why would you do that?” (Lit: “Your reason that you did that was what?”)

B.3.4.9 *-_wayu*

As noted in §B.3.4.1, *-_wayu* (“instrument”) is particularly interesting in that it appears to participate in two different constructions, with different resulting meanings: the “lexical” *-_wayu* is added to “neutral” stems – that is, stems that are not yet formally nouns or verbs – and creates stems referring to instruments or tools (1005), but which would stand in a variety of semantic relationships with the preadjacent stem, while “passive” *-_wayu* is added to verbal stems – that is,

²⁸This is literally “reason for going”, but there is no requirement that movement be involved (§B.2.1).

stems with one of the verbal suffixes like *-la* or *-xʔid*, or roots that tend to be used as verbs without verbal affixes like *co* (“give”) – and promotes to the subject an argument of the preadjacent verb, regardless of whether this argument is an instrument or tool (1006).

(1005) a. kádayu
 kát-*w*ayu
 write-INSTR
 “pen, pencil, writing implement”

b. ʔibayu
 ʔip-*w*ayu
 pinch-INSTR
 “dice”

(1006) a. kəpídayu
 kəp-xʔid-*w*ayu
 scissor.motion-CHANGE-INSTR
 “to be taken by tongs”

(Boas et al., 1947, p. 312)

b. keʔgəsílayu
 keʔgs-(g)i-l-*w*ayu
 cake-do-ONGOING-INSTR
 “[of a cake] to be made”

“Lexical” *-wayu* has several variant forms, which are often but not always predictable. Some stems ending in plain resonants and /a/ take *-yú* rather than *-ayu*. Sometimes both forms are possible, and for at least one root, *q̣n-* (“sew”), the two forms have different meanings (1009).

(1007) a. diğəmyú
 dy-(ğ)m-*w*ayu
 wipe-face-INSTR
 “face towel”

(FirstVoices, 2009)

(1008) a. ǰəlayú, ǰəlyú
 ǰl-*w*ayu
 dip-INSTR
 “dip net, brailer”

b. xac̣aỵu
xac̣-w ayu
strain.food-INSTR
“strainer for food”

c. celaỵu
cel-w ayu
bail.water-INSTR
“canoe bailer”

(1009) a. q̣ənỵu
q̣n-w ayu
sew-INSTR
“thread”

b. q̣ənayu
q̣n-w ayu
sew-INSTR
“needle”

-wanu is used for stems that receive *-nd* rather than *-xʔid* (Boas et al., 1947, p. 317) – that is, after many location and body part suffixes.

(1010) a. hənχλanu
hn-xλ-w anu
put.container-on.fire-INSTR
“cookpot, kettle” (cf. *hənχλənd*, “put a pot or kettle on the stove”)

b. sikaḡanu
sik-haq-w anu
use.cane?-carry-INSTR
“a cane”

(FirstVoices, 2009)

c. ʔəχʔstanu
ʔəχ-ʔst-w anu
do-in.water-INSTR
“be put into water”

(Boas et al., 1947, p. 317)

B.3.4.10 *-_was*

-_was primarily indicates the place where something is done, although it has a variety of other uses as well.

- (1011) a. *ləʔas*
l-_was
go-PLACE
“location, destination”
- b. *səbilas*
sp-_wil-_was
project.light-indoors-PLACE
“theatre, cinema”
- c. *ləǵas*
lq-_was
pick.seaweed-PLACE
“seaweed patch” (FirstVoices, 2009)
- (1012) a. *dəʔas*
d-_was
hold-PLACE
“railing, banister” or “a place of holding” (FirstVoices, 2009)
- b. *ǵawas*
ǵax^v-_was
hang-PLACE
“clothes line” (FirstVoices, 2009)
- c. *ǵax^vcəwas*
ǵax^v-c^w-_was
hang-in-PLACE
“hanger”
- d. *xəndʔas*
xns-_was
sniffle-PLACE
“nose”

- e. gəldas
 glt-*w*as
 long-PLACE
 “trunk, luggage, box, container”

-was lengthens resonant-final stems.

- (1013) a. g^wañas
 g^wn-*ew*as
 pay.debt-PLACE
 “place where debt is paid” (Boas et al., 1947, p. 318)
- b. cayás
 cy-*ew*as
 draw.water-PLACE
 “place of drawing water” (Boas et al., 1947, p. 318)
- c. hañas
 hn-*ew*as
 put.container-PLACE
 “place to tie up a canoe or place to put box” (FirstVoices, 2009)

The referent of an *-was* stem is not always locative; sometimes the referent is a patient or goal (1014).

- (1014) ñigas
 ñik-*w*as
 say-PLACE
 “person one speaks to” (Boas et al., 1947, p. 318)

This suffix is also one of the main ways to derive abstract concepts; as Boas notes, “While this suffix designates primarily place, it also has many derived meanings such as time, size, number, way of” (Boas et al., 1947, p. 318).

- (1015) yaqəndas
 yaqnt-*w*as
 speak-PLACE
 “language”

Dimension terms are also built with *-was*; these will be considered in some more detail in

§4.4.5.

- (1016) a. $\dot{w}alad^{\prime}as$, $\dot{w}alayas$
 $\dot{w}alas$ - $_w$ as
big-PLACE
“size”
- b. $\dot{w}as\check{g}\check{o}mas$
 $\dot{w}as$ - $s\check{g}m^{\prime}$ - $_w$ as
length-round?-PLACE
“length”
- c. $\dot{w}og^w$ as
 $\dot{w}ok^w$ - $_w$ as
thick-PLACE
“thickness”

Many of abstract nouns are built on the indefinite stem \check{g}^wi -, the non-interrogative counterpart of the question stem $w^{\prime}y$ - (cf. §B.2.2, §4.4.4).

- (1017) a. $g^wi\check{?}\check{x}u\dot{w}as$
 g^wi - $\check{?}\check{x}u$ - $_w$ as
whatever-throat-PLACE
“voice, what one sounds like”
- b. $g^wi\check{?}stu\dot{w}as$
 g^wi - $\check{?}stu$ - $_w$ as
whatever-eye-PLACE
“color”
- c. $g^wi\check{k}a\dot{l}as$
 g^wi -(k) $_h$ a-l- $_w$ as
whatever-sound-ONGOING-PLACE
“manner of speaking”

We can see these used as arguments in (1018-1020).

- (1018) q̇inəmi ǵ^wixd^zasasa k̇utəla
q̇inm=i ǵ^wi-ks-_was=asa k̇utla
many=3DIST INDEF-manner-NMZ=3POSS salmon
“There are many kinds of salmon.” (Goodfellow et al., 1991, p. 13)
- (1019) k̇iʔsuḥ q̇oʎuḥ Jonəḥ ǰiʔs ǵ^wigilas
k̇iʔs=uḥ q̇oʎ=uḥ Jon=q ǰ=iʔs ǵ^wi-gi-l-_was
not=3MED know=3MED Jon=VIS ACC=3POSS.REFL **what-do-ONGOING-PLACE**
“Jon doesn’t know what he’s doing.” (Lit: “Jon doesn’t know his behavior.”)
- (1020) k̇iʔsaʔaḥus q̇oʎa ǰən ǵ^wikd^z-_was
k̇iʔs=a=a=q=us q̇oʎa ǰ=n ǵ^wi-ks-_was
not=a=a=VIS=2POSS know ACC=1POSS INDEF-manner-PLACE
“**You don’t know how I feel.**”

The only “ǵ^wy- noun” that I have encountered used as a predicate is ǵ^wixʔidəʔas, which has a use something like “to do so”.

- (1021) a. ċəpənʔsasa k̇awas laḥa ʎina
ċp=nʔs=(a)sa k̇awas l=(a)ḥa ʎina
dip.food=1INCL=OBL smoked.fish PREP=ACC eulachon.grease
“**We dip smoked fish in the eulachon grease...**”
- b. ǵ^wixʔidəʔasəmḥəʔənʔs ċəmdaqilaʔ
ǵ^wi-xʔid-_was=ʔm=ḥa=nʔs ċəmdaqilaʔ
INDEF-CHANGE-NMZ=FOC=ADD.FOC=1INCL dried.eulachon
“...we also **do so** with dried eulachon.” (Goodfellow et al., 1991, p. 21)
- (1022) *Context: The Wildman protects a child who got lost, but upon being invited home, he refuses, saying he has to stay on the island.*
- a. qən ʔəʔaḥsila ǰa gəngənanəm xəsa,
q=n ʔ-ʔaḥ-ksi-la ǰa gn-gn-_wanm xsa,
for=1POSS REDUP-do-occupy-ONGOING ACC REDUP-young-person lost,
“...and protect other lost children...” (lit: “children who are/get lost”)

- b. $\check{g}^wix\eta id\eta asu\eta s$
 $\check{g}^wi-x\eta id-was=u\eta s$
 INDEF-CHANGE-NMZ=2POSS
 “...like you **did**.”

(Cranmer and Janzen, 2014)

B.3.4.11 $-_waci$

The combination of $-_was$ and $-_hi$ (a general nominalizer, usually indicating objects) is very common, and indicates container-like objects such as bowls, boats, or buildings; in a sense, it represents objects that are also locations where other objects can be.

Usually, stems in $-_waci$ represent containers associated with particular actions (1023) or things (1024).

- (1023) a. $\check{x}ig^waci$
 $\check{x}ik^w-as-hi$
 sweep-PLACE-NMZ
 “dustpan” (cf. $\check{x}ig^wayu$, “broom”)
- b. $y\eta qa\grave{c}i$
 $yq-was-hi$
 knit-PLACE-NMZ
 “knitting basket” (cf. $\eta qa\grave{c}i$, “knitting needle(s)”)
- c. \check{x}^widaci
 $\check{x}^wit-was-hi$
 stir-PLACE-NMZ
 “mixing bowl” (cf. \check{x}^widayu , “mixing spoon”)

- (1024) a. $bad\eta aci$
 $bad-was-hi$
 butter-PLACE-NMZ
 “butter dish” (cf. $badayu$, “butter knife”)

(FirstVoices, 2009)

- b. $k^wigwaci$
 $k^wik^w-as-hi$
 eagle-PLACE-NMZ
 “eagle’s nest”

Many names for types of boats are built with *-_wač̣i*:

- (1025) a. *dabač̣i*
dap-_was-_hi
tow-PLACE-NMZ
“tugboat” (FirstVoices, 2009)
- b. *kiłaç̣i*
kił-_was-_hi
line.fishing-PLACE-NMZ
“fishing boat”
- c. *łəmğaç̣i*
łmq-_was-_hi
proud-PLACE-NMZ
“tourist ship” (FirstVoices, 2009)

Sometimes *-_wač̣i* stems refer to buildings, other structures, or places (1026).

- (1026) a. *xəlač̣i*
xəł-_was-_hi
smoke.fish-PLACE-NMZ
“smokehouse”
- b. *ğəlğaç̣i*
ğlq-_was-_hi
swim-PLACE-NMZ
“swimming pool”
- c. *kuʔdʔáč̣i*
kws-_was-_hi
potato-PLACE-NMZ
“potato patch”

B.3.4.12 *-aỵ'*

A wide variety of Kwak'wala nouns are built from *-aỵ'* (as well as *-_waỵ'* and *-_haỵ'*), and there is no single way to characterize them.

- (1027) a. hə́meʔ
 hm-áʔ
 eat-NMZ
 “food”
- b. pə́teʔ
 pt-háʔ
 take.medicine-NMZ
 “medicine”

There are some tendencies, however; articles of clothing, blankets, and jewelry, for example, are often *-aʔ* forms (1028), as are body parts and parts of wholes (1029).

- (1028) a. qəsʔəneʔ
 qs-(k)ən-áʔ
 shirt?-body-NMZ
 “shirt”
- b. nəx^wʔənaʔi
 nx^w-(k)n-áʔ
 cover-body-NMZ
 “regular blanket”

(FirstVoices, 2009)

- (1029) a. ʔəwigeʔ
 ʔw-ik-wáʔ
 so-back-NMZ
 “one’s back, back of something”

- b. ʔuχtoʔ
 ʔw-χtw-áʔ
 so-top-NMZ
 “top”

(Boas et al., 1947, p. 324)

- c. ʔuχləʔ
 ʔw-χl-áʔ
 so-stern-NMZ
 “stern of canoe”

(Boas et al., 1947, p. 324)

One use of particular note is to create stems referring to the action or state itself. For exam-

ple, while *-_wm* stems seem to refer to the external participants in attitudes – for example, what one is afraid of or worried about – the *-ay'* stem can refer to the attitude itself.

- (1030) a. *n̄inkĩḡe?*
n̄i-n̄ik-_hiq-_way'
 REDUP-say-in.self-NMZ
 “thought”

This can also be seen with an apparently related suffix, *-_hinay'* or *ʔinay'i*, which often derives nouns that would be similar to English gerunds like “working” or “hearing”.

- (1031) a. *ʔiyaxine?*
ʔiyax-_hinay'
 work-GER
 “work, job, profession”
- b. *wəʔəlaʔinay'i*
wəʔ-əla-ʔinay'
 hear-ONGOING-GER
 “hearing”
- c. *hiliqəlinay'i*
hił-_hiq-l-_hinay'
 correct-in.self-ONGOING-GER
 “trust” (cf. *hiliqəla*, “to trust”)

(FirstVoices, 2009)

B.3.4.13 *-w̄t, -w̄ł*

The suffixes *-w̄t* and *-w̄ł* serve to make stems referring to “companions/fellows”, often a comitative participant in an event; Hall (1888a, p. 64) describes this as marking “fellow-agent nouns”.

(1032) a. ḡuk^wəluʔt
 ḡuk^w-l-ẁt
 house-ONGOING-fellow
 “compatriot, fellow villager, ‘my people’”

b. ʔiʔaḵəluʔt
 ʔiʔaḵ-l-ẁt
 work-ONGOING-fellow
 “co-worker”

c. ɔ̌aɔ̌uḷuʔt
 ɔ̌a-ɔ̌uḷ-_{rh}-ẁt
 REDUP-know-try-fellow
 “fellow scholar”

(Hall, 1888a, p. 64)

After surface fricatives and dorsals, *-uʔt* surfaces as *ẁət* (1033), according to the rule in §A.6.5.

(1033) a. ʔəmḷẁət
 ʔmḷ-ẁt
 play-fellow
 “teammate, play-fellow”

b. kiḷẁət
 kiḷ-ẁt
 net.fish-fellow
 “fishing companion”

(FirstVoices, 2009)

c. qasẁət
 qas-ẁt
 walk-fellow
 “walking partner/companion”

(FirstVoices, 2009)

As with most of the other voice suffixes, it can also be added to non-eventive stems.

(1034) bəxẁət
 bk^w-ẁət
 man-fellow
 “fellow man, companion”

-wít and *-wít* do not seem to have the exact same meaning and distribution; I am not certain what the difference is, but the meanings and postnominal morphology of *-wít* stems suggests to me that they are lexical nominalizers forming “companion/fellow” nouns, while the meanings and postnominal morphology of *-wít* suggests that they might be forming a “comitative” passive of verbs.

- (1035) a. ʔəng^wis gaǰ wǎloʔoʔs
 ʔng^w=i=s gaǰ-wǎl=a=uʔs
 who=3_{DIST}=2_{POSS} come-COMIT=INVIS=2_{POSS}
 “Who did you come [to Vancouver Island] with?” (Lit: “The one who came with you was who?”)
- b. kǎyosən gaǰ wǎla
 kǎyos=n gaǰ-wǎl=a
 none=1_{POSS} come-COMIT=A
 “I didn’t come with anyone.” (Lit: “The one who came with me was no-one”.)

B.3.4.14 Agentive suffixes

There is no participant form devoted to creating agentive nominalizations; enclitic determiners added to a verb suffice to refer to the event’s agent for the purposes of, say, questioning, such as *=ida gaǰεʔ* (“the one who came”) in (1036).²⁹

- (1036) ʔəng^wida gaǰεʔ suǰ^wda himǎyǎǰ
 ʔng^w=i=da gaǰ=a=aʔ s=uǰ=da him-ǎy=q
 who=3_{DIST}=DET come=a=INVIS OBL=3_{MED}=DET food-NMZ=VIS?
 “Who brought the food?” (Lit: “The one who came with the food is-who?”)

There are various suffixes that form stems describing people that habitually, frequently, or skillfully do something. *-_hinuǰ^w* usually describes experts or those who are good at something.

- (1037) a. kiǎ_hinuǰ^w
 kiǎ_hinuǰ^w
 net.fish-expert
 “fisherman” (lit: “good at catching fish with a net”)

²⁹Such verbs very often have *=εʔ* after them, but this should not be confused with the nominalizer *-ǎy* (often [eʔ]) (§B.3.4.12); this *=εʔ* has a different vowel quality, never weakens or hardens the stem, and occurs after rather than before tense enclitics.

- b. qəyákinuǰ^w
 qəyá-k_hinuǰ^w
 kick-expert
 “soccer player” (lit: “good at kicking”)

*-_hʔs*³⁰, *-_hik^w*, *-bəs*, and *-_wlk^w* indicate someone who does something often, habitually, or to an extreme.

- (1038) a. λəλəʔs
 λl-λl-_hʔs
 REDUP-forget-AUG.CHAR
 “forgetful”
- b. miλik^w
 miλ-_hik^w
 mean-CHARACTER
 “person who is mean, who teases”
- c. yaxpaxstabəs
 yak-p-ǰsta-bs
 bad-taste-mouth-always
 “someone who is always swearing or saying bad things”
- d. qədəlk^w
 qt-_wlk^w
 argue-always
 “stubborn”

Boas et al. (1947, p. 336) describe *-bəs* (sometimes *-_rbəs*) as meaning “fond of” or “devoted to”, but my consultants report that it means “always”, which makes more sense for (1039): everyone is *fond* of winning, but only those who actually win frequently are *dulobəs*.

- (1039) dulobəs
 dulo-bs
 win-always
 “someone who always wins”

³⁰Boas et al. (1947) and FirstVoices (2009) transcribe these words with *-əs*, but I often hear a glottal stop before the *s* and transcribe it as such here.

B.3.4.15 Other participants

There is no single way to refer to the time at which an event takes place. As Boas et al. (1947) note, *-was* can refer to the time of doing, but it also refers to places and various abstract concepts. There is a suffix *-hənǎ* that creates stems that denote, roughly, seasons, but can also be used for shorter periods of time.

- (1040) a. miǎʔənǎ
miǎ-hənǎ
sleep-season
“sleep time, bedtime”

The suffix *-xdəm* (roughly, “proper” or “appropriate”) was used to denote shorter, conventionalized times in Hall (1888a, p. 65) and Boas et al. (1947, p. 366), while *-hənǎ* described seasons and longer spans of time. Currently, *-hənǎ* is used for both, as the modern form in (1041b) shows.

- (1041) a. həmǎpdəm
hmǎ-ap-xdəm
eat-consume-proper
“dinner hour” (Hall, 1888a, p. 65)
- b. həmǎʔənǎ
hmǎ-hənǎ
eat-season
“eating time”

-alas indicates a material associated with an action, often the input material, or the material for making the tool associated with that action.

- (1042) a. yəqalas
yq-alas
knit-material
“wool”
- b. mək^walas
mk^w-material
to.iron-input
“things or clothes that need ironing” (FirstVoices, 2009)

c. *čəpalas*
čp-alas
 dip.in.grease-material
 “food eaten with eulachon grease” (FirstVoices, 2009)

d. *sixxwalas*
six^w-alas
 paddle-material
 “material for paddle” (Boas et al., 1947, p. 322)

ǰdəmkən, from *-xdəm* (“proper/appropriate thing, time, or place”) and *-kən* (“body”), describes the clothes associated with particular actions.

(1043) a. *ʔiʔaǰdəmkən*
ʔiʔaǰ-xdm-kn
 work-proper-body
 “work clothes”

b. *ʔəmlədəmkən*
ʔəml-xdəm-kən
 play-proper-body
 “play clothes”

c. *qəyaxdəmkən*
qəyak-xdm-kn
 kick-proper-body
 “soccer uniform”

d. *miǰdəmkən*
miǰ-xdm-kn
 sleep-proper-body
 “pyjamas”

-_humas and *-_himas* tend to derive names for classes of objects, or objects that fall into a class, like animals or birds.³¹ *-_himas* seems to be the historical form (Boas et al., 1947); some of these forms (like 1044a) seem to have switched to *-_humas* more recently.

³¹*q^waǰq^waǰʔumas* for “plants” is probably a recent coining, since many speakers do not seem to have heard of it, but they readily accept the term.

(1044) a. gəlǵəʔumas
gl-gl-humas
REDUP-crawl-CLASS.NMZ
“land animals, quadrupeds”

b. p̣ịp̣ə̣λumas
p̣ị-p̣λ-humas
REDUP-fly-CLASS.NMZ
“birds”

c. ʔixp̣əʔomas
ʔik-p̣-humas
good-taste-CLASS.NMZ
“sweets, dessert, fruit”

d. c̣ịc̣əḳ^wimas
c̣ị-c̣əḳ^w-himas
REDUP-clam?-CLASS.NMZ
“shellfish”

(FirstVoices, 2009)

e. λ̣ụ-λ̣ə̣p̣imas
λ̣ụ-tup-himas
REDUP-barbecue.salmon?-CLASS.NMZ
“berries”

They also happen to serve as the stem formatives for particular adjectives.

(1045) a. ʔalumas
ʔal-humas
recent-CLASS.NMZ
“new”

b. hilumas
hił-humas
correct-CLASS
“great, amazing”

c. we^limas
 we^l-_himas
 weak-CLASS
 “weak”

d. łok^wimas
 łok^w-_himas
 strong-CLASS
 “strong”

There are several suffixes that form stems referring to what is left over or left behind, -_hay^laway^l (“left over”, cf. -_hay^lola “to leave behind”), -_laway^l (cf. -_lola, same meanings), and -_rmut (“refuse, leavings, things left behind, worthless things”).

Boas describes a suffix combination for things left behind, -_lawe^l (Boas et al., 1947, p. 313), which seems to be a combination of -_law (“leave behind”, cf. kwk-_lola) and one of the -ay^l nominalizers. (In some words the suffix combination appears as -_hay^lawe^l, with an additional initial suffix.)

(1046) gi_ls_lawe^l
 gy-_hs-_law-ay^l
 put-on.ground-leave.behind-NMZ
 “left on the ground” (cf. gi_ls_lola, “to leave behind on the ground”)
 (Boas et al., 1947, p. 313)

As with other such suffixes, the stem is not always an action like “put on the ground”; it can also be something like a shape-classifying stem.

(1047) m^lag^wil_laway^l
 m^wk^w-_wil_l-_law-ay^l
 round-in.house-leave.behind-NMZ
 “round thing left in house” (cf. m^lag^wil_lola, “to leave a round thing in a house”)
 (Boas et al., 1947, p. 313)

B.4 Enclitics

Kwak’wala has a wide range of enclitic particles, with a variety of uses, including determiners, possessive markers, discourse particles, tenses, and modals.

In this section I will detail a number of these enclitics, roughly traveling rightward in the

sentence; I begin with predicate-modifying enclitics in §B.4.2, and proceed to sentential enclitics – a variety of elements indicating markers of questionhood, tense, modality, and contrast, and also containing various pronominal elements – in §B.4.3.

There are also a number of enclitic categories associated with arguments themselves, and which form a constituent with the argument; we can see this when we consider pairs of sentences like those in (1048).

- (1048) a. $ləmisi$ $Bək^wəs$ $ńika$
 $l=ʔm=is=i$ Bk^w-hs $ńika$
 then=VER=and=3DIST **man-outside** say
 “Then **Wildman** said...” (Cranmer and Janzen, 2014)
- b. $ləmis$ $ńiki$ $Bək^wəs...$
 $l=ʔm=is$ $ńik=i$ Bk^w-hs
 then=VER=and say=3DIST **man-outside**
 “Then **Wildman** said...” (Cranmer and Janzen, 2014)

Unlike the “sentential” enclitics that occupy a fixed place in the sentence, the enclitic $=i$ moves when $Bək^wəs$ moves, suggesting that it forms a constituent with $Bək^wəs$. Some of these occur before the argument, and are termed “prenominal” (§B.4.4), others occur in the second position of the DP (that is, after the first word of the DP) and are termed “postnominal” (§B.4.4). I assume the analysis in Chung (2007) for these, with the exception that I assume tense enclitics to be a clausal category rather than one associated with DPs.

It is not unusual to find a number of enclitics, in different categories, “piling up” on a single word; in (1049) we find three sentential second-position enclitics ($=ʔm$, $=ǰa$, and $=uǰ$) followed by the prenominal enclitics ($=s$ and $=iʔs$) of the following word.

- (1049) $ʔǰǰəlaʔəmǰǰuǰasiʔs$ $ǰanənǰaʔstu$
 $ʔǰ-la=ʔm=ǰa=uǰ=(a)s=iʔs$ $ǰannǰa-ʔstu$
 do-ONGOING=VER=ADD.FOC=3MED=OBL=3POSS.REFL glasses?-eye
 “He’s also wearing his glasses.”

B.4.1 Epenthetic enclitic *a*

One notable property of enclitics is the resolution of certain consonant clusters by the addition of [a]. Suffixes either do not resolve these clusters at all, or (when necessary for other phonological reasons) insert an [ə], but enclitics receive [a] when they themselves do not start with a potential

+R (§A.2) nucleus (like the second-person =*s* or the future tense =*λ*).³²

We can see in (1050), for example, two instances of [a] that are not always present in other morphs of *yəx^w* (“dance”), =*xdač^w* (plural), or =*s* (second person). While one of these might be that predicative [a] that appears after predicate stems, they are probably not *both* this; this “epenthetic enclitic [a]” can occur numerous times within a stem, and in any case it can also occur in various sentential positions for which we would not expect the “predicative” [a], like after the third person distal =*uč* in (1049).

- (1050) *yí?yəx^waxdač^was*
yý-yx^w=axdač^w=as
REDUP-dance=PL=2
“You (plural) are dancing.”

We can observe the difference between the epenthetic [ə] before suffixes and the epenthetic [a] before enclitics in the examples in (1051).

- (1051) a. *həmd^zək^w*
hms-_wk^w
pick.berries-PART
“picked berries”
- b. *həmsabuła*
hms-a=buła
pick.berries-A=pretend
“pretend to pick berries”

We can also see that this *a* seems to act like /a/ in the vowel coalescence patterns in (1052); the *a* coalesces with /w/ to form [a].

³²There does appear to be some sensitivity to the identity of the previous segment (words that end in *s*, *l*, and *m* frequently do not receive [a]) or possibly the word class (e.g. noun or verb) of the word to which the enclitic attaches; I have not managed to pry these criteria apart.

B.4.2 Predicate-modifying enclitics

In any Wakashan language, there is a question regarding where in the word the suffixes end and the enclitics begin.³³ Various predicate modifying elements (e.g., *buł̩a*, “pretend”; *nuk^w*, “have”; *ǵaway̩*, “more”) which might initially appear to be suffixes (even suffixes that we might describe as “lexical”, like *ga*, “eat”), can be occasionally observed to engage in enclitic-like behavior.

Enclitic-like behavior of apparently suffixal material is still productive in Nuuchahnulth; Nakayama (2002) and Wojdak (2005) offer arguments that these elements are nonetheless still affixal, and constitute a class of elements (“affixal predicates”) separate from enclitics.

In Kwak’wala, on the other hand, this currently appears to be more of a relic phenomenon; I only have encountered a few examples in my own data, and speakers do not always accept examples that other speakers have produced. The question of what these elements “really” are is thus difficult to answer. Nonetheless, it is important to consider some of their enclitic-like properties, because without recognizing them some of the example sentences in this thesis – like (75-76) in Chapter 3 and (179-180) in Chapter 4 – would be otherwise difficult to comprehend.

B.4.2.1 Phrasal attachment

We can observe, for one, that occasionally in multiple-word phrases a modifying element like *nuk^w* (“have”), *(x)dʔak^w* (“resemble”), or *ǵaway̩* (“more”) attaches to the first word of the phrase when it would modify the whole phrase, even though it does not modify the first word itself. For example, in (1054), the preadjacent phrase would be *səka ʔəmləm* (“five toys”); *=nuk^w* (“have”) is added to the first word (*səka*, “five”) rather than (as we might have expected) the second (*ʔəmləm*, “toy”).

(1054) ʔəng^wuχ̩da səkanuk^weχ̩ ʔəmləm
 ʔng^w=uχ̩=da ska=nuk^wa=q ʔml_{-w}m
 who=3MED=DET five=have=VIS play-NMZ
 “Who has five toys?” (Rough lit: “The one that five-has toys is who?”)

(1055) ʔoladəʔak^wa x^wəmdiya
 ʔwa-la=dʔak^wa x^wmdi
 so-ONGOING=resemble otter
 “It really looks like a otter.” (Rough lit: “It really-resemble is an otter.”)

³³This is a question in many languages, of course, but it is particularly pressing in Wakashan languages due to the high degree of both suffixation and encliticization.

(1058) *Context: Pat has shown up to a Halloween party with his hair and clothing done in the manner of his friend Mike.*

- a. nug^wabułaćimas Mike
 nug^wa-buła-ćimas Mike
 be.1-pretend-should Mike
 “I’m supposed to be Mike.”
- b. hebułux̃ Mikəx̃
 he-buł=uḥ̃ Mike=q
 be.3_{DIST}-pretend=3_{MED} Mike=VIS
 “He’s pretending to be Mike.”

(1059) *Context: I am playing hooky on Vancouver Island, while still telling people I am in Vancouver.*

- hebułən ləʔe Vancouver
 he-buł=n l=a=i Vancouver
 be.3_{DIST}-pretend=1 PREP=EMBED=3_{DIST} Vancouver
 “I’m pretending to be in Vancouver.”

Unlike the phrasal attachment above (§B.4.2.1), all speakers that I have asked could comprehend sentences like these without difficulty, although none were completely certain of the details (e.g., with which element should the copula agree, what interpretations are possible of a constructed sentence, etc.).

B.4.3 Sentential enclitics

For the predicate-modifying elements above, the enclitic nature of the elements is only occasionally seen. The elements that follow these – =?m and the material that follows =?m – the enclitic nature is more apparent; each of these expresses a sentence- or clause-level distinction like polarity or tense, each occurs reliably³⁵ in a particular sentential position (for most of these, second position).

It should be noted that, since arguments can be (and often are) of clausal origin, sentential enclitic material that is associated with clausal categories (like tense) can occur within arguments (as well as quasi-arguments like copular complements).

³⁵To be precise, tense, when it occurs, will in most sentences occur on each predicate in the sentence (§B.4.3.3), and =?m has a variety of somewhat fossilized uses, and these uses can occur outside of second-position (Chapter 8).

These elements considered below do not by any means exhaust the elements that occur after =?m, but they are some of the most frequent, the ones that will feature in other observations later in this work, or ones that may be of special interest to pragmaticists.

B.4.3.1 =?m

The “discourse” enclitic =?m is the most frequent of the sentence-level enclitics, and occurs in a wide variety of contexts; I consider it in detail in Chapter 8, where I suggest that its basic use is to signal the presence of a discourse-relevant polar (*P/not P*) contrast, and that other contexts in which it is ubiquitous (like additive and exclusive contexts) are ones in which polar contrasts are discourse-relevant.

B.4.3.2 =ṭ(a), “but”

=ṭ(a) is often used in situations in which we would use “but” in English.

(1060) *Context: The speaker is describing the difference between two pictures.*

- a. dənḥəluḥda ḥəqʷana
 dnḥ-l=uḥ=da ḥəqʷana
 sing-ONGOING=3MED=DET bird
 “That bird is singing.”
- b. həmaptida nəmukʷ ḥəqʷana ḥada qalawi
 hm-ap=ṭ=i=da nm-ukʷ ḥəqʷana ḥa=da qalawi
 eat-consume=but=3DIST=DET one-person bird ACC=DET worm
 “But that bird is eating a worm.”

(1061) *Context: The speaker is narrating a storyboard in which we are comparing a man to his taller, wealthier, and altogether more skilled brother.*

- a. gəltəḥstuḥ Masakiyəḥ
 glt-_hḥst=uḥ Masakiy=q
 long-end=3MED Masaki=VIS
 “Masaki is tall.”

- b. gəltəʃstaɣaweti nuleʔsuχ la
 glt-_nχst-(a)ɣawayʔ=t=i nul=a=aʔ=s=uχ la
 long-end-more=but=3DIST older.sib=a=INVIS=3POSS=3MED PREP
 “But his brother is taller.”

It also, however, occurs in various situations in which a contrast is relevant, but in which “but” would be somewhat awkward in English. I think the difference may lie in expectation; English “but” has some manner of requirement that the sentence be contrary to expectation, whereas I have not noticed such a requirement in Kwak’wala. I think that =*ta* may just have a requirement that it contrast in some way – in exactly what way, I am unsure – with something prior, without necessarily requiring that anything be contrary to *expectation*.

- (1062) a. qəlχʔidi Hannah ləʔe ʔedaqilela
 qł-xʔid=i Hannah l=a=i ʔedaq-_eyly’-ala
 tired-CHANGE=3DIST Hannah PREP=EMBED=3DIST return-here.and.there-ONGOING
 “Hannah got tired from pacing.”

- b. la¹ta ne¹ak^w qəs ʃ^wəlgəlileʔ.
 la=¹ta ne¹ak^w q=s ʃ^wl-gl-_wil=a=aʔ.
 go=**but** go.home for=3POSS lie-away-indoors=a=INVIS
 “She went home to lie down.”

- (1063) quʔs q^wəlyax^wʔiλ,
 q=uʔs q^wls-_wak^w-xʔid=λ
 for=2POSS old-PART-CHANGE=FUT
 la¹taλəs λix^wʔiλ laχa k^waxdəmił
 la=¹t=(a)λ=s λix^w-xʔid=λ l=(a)χa k^wa-xdm-_wil
 go=**but**=FUT=2 ??-CHANGE=FUT PREP=ACC sit-proper?-indoors
 “When you get older, then you can move to the [adult] chair.”

- (1064) qūχ^wəmułćudənʔsaχa ɣanuλ, la¹ənʔs k^wəlχʔida
 qūχ^wm-ul-ću-d=nʔs=(a)χa ɣanuλ, la=¹nʔs k^wl-xʔida
 clothes-??-in-CHANGE=1INCL=ACC night, then=**but**=1INCL lie-CHANGE
 “We get undressed at night, then we go to bed.” (Goodfellow et al., 1991, p. 103)

While =*ta* on its own seems to occur before tense enclitics (1065), we can also occasionally observe it after later enclitics in certain combinations like =*χat* and =*lat*.

- (1065) ǰəʔgustowi Sarah, məmiχkəntəχdən
 ǰʔ-gusto=i Sarah, m-miχ-kn=t=(a)χd=n
 early-up=3DIST Sarah, REDUP-sleep-body?=but=RPAST=1
 “Sarah got up but I slept in.”

I have not observed the alternation suggested in Boas et al. (1947, p. 341), in which λ means “on my part” and $\acute{t}a$ means “on his part”; as (1064) and (1065) show, $=\acute{t}a$ is used for first persons as well.

B.4.3.3 Tense

There are three main non-present tenses in Kwak’wala, $=\lambda$ (future), $=xd$ (recent past), and $=ul$ ~ $=wə\acute{t}$ (distant past).³⁶ The only tense marker that seems to be obligatorily marked is the future tense; the past tenses are optional (Greene, 2013). The epistemic modal $=\acute{x}ənt$ (“must, might”) also appears in this slot, although other apparently modal elements (like $=\acute{x}s$) generally occur before $=\lambda m$.

Of the second-position sentential enclitics, tense is the only one that will occur on each predicate stem in a sentence with auxiliaries (or what Boas terms “coordinate verbs”).³⁷

- (1066) kʲiʔsλuχ duloλ
 kʲiʔs=λ=uχ dulo=λ
 not=FUT=3MED win=FUT
 “He won’t win.”

- (1067) ʔoʔəmλən kʲwəʔelλ
 ʔwa=ʔm=λ=n kʲw-wil=λ
 so=VER=FUT=1 sit-indoors=FUT
 “I’m just going to sit indoors.”

This is most readily seen in the future tense, since marking of other tenses is not obligatory; for the non-obligatory tenses I most frequently encounter the tense marked on the first element and not on subsequent ones.

³⁶In Boas-era Kwak’wala, there was also a use of $xʔid$ as a recent past marker that is distinct from its use earlier in the stem, but I have not encountered this usage.

³⁷There are conventionalized uses of $=\lambda m$, in which a particular operator always receives $=\lambda m$ even when it is not in second position, and in such cases $=\lambda m$ can occur on multiple predicate stems, but this is a different phenomenon; $=\lambda m$ will not occur on every auxiliary and predicate the way the future tense $=\lambda$ does.

(1068) ʔoʔəmxdən k^wəʔeɭa
 ʔwa=ʔm=xd=n k^w-_wiɭa
 so=VER=REC.PAST=1 sit-indoors
 “I was just sitting indoors.”

(1069) ləʔəmxdən pətida
 l=ʔm=xd=n pt-xʔida
 then=VER=REC.PAST=1 medicine-CHANGE
 “I already took my medicine.”

Even for the future tense, this “tense agreement” is not completely obligatory – examples in which one of the elements lacks a future tense specification are not hard to find – but when agreement is frequently absent, or when there can be non-agreement between tenses (that is, over marking of different tenses), that is likely evidence that the predicates in question do not belong to the same clause.

Tense marking also appears within DPs as an apparent postnominal enclitic, to mark arguments as being future or past, although (contra Chung, 2007) I do not analyze postnominal tense as being a separate inflectional category (§B.4.4.6).

B.4.3.4 Questioning =a

Yes/no questions receive an =a enclitic in second position, occurring in the slot after the tense enclitic. It can be difficult to notice, since it often occurs right before another enclitic with an initial nuclear segment. For example, the realization of the second person is often [=as], but if we look at instances of second person subjects after /m/ and /s/, as in (1070a) and (1070a), we can see that the [a] usually encountered in =as is really the epenthetic enclitic a (§B.4) and the second person enclitic is simply /s/. In yes/no questions like (1070b) and (1071b), however, this =a is present regardless.

(1070) a. ʔoxseʔəms gənanəma
 ʔwa=xse=ʔm=s gn-_wanm=a
 so=still=VER=2 young-person=A
 “You’re still a child.”

b. ʔoxsemas čəgɪɭa
 ʔwa=xse=ʔm=a=s čk-_wɪɭa
 so=still=VER=QUES=2 awake-indoors=A
 “Are you still awake?”

(1071) a. *Context: We're brainstorming what Pat can do today.*

welʔəms la ǵəlqa
 wel=ʔm=s la ǵlqa
 can=VER=2 ACC swim
 “You can swim.”

b. *Context: Someone has to be the fish in our fish/fisherman role play, but no one wants to.*

welmas kutəlaʔa
 wel=ʔm=a=s kutla=a
 can=VER=QUES=2 salmon=a
 “Can you be the fish?”

Before enclitics that begin with a syllabic nucleus, like =*n* (first person subject, first person possessive), =*u*ǰ (third person medial subject), or =*i* (third person distal subject), the yes/no question =*a* receives the same “variable” quality that, in §A.5.3, I analyzed as the realization of the schwa before /a/ syllabified as an onset.

(1072) ʔixmeʔeda həlagək^w
 ʔik=ʔm=a=i=da hlaq-_wk^w
 good=VER=QUES=3DIST=DET pay-PART
 “Is the pay good?”

(1073) welmæʔn ʔəxeʔ?
 wel=ʔm=a=n ʔx-aý
 can=VER=QUES=1 aux-NMZ?
 “Can I have one?”

B.4.3.5 =ǰa, “also”

The additive focus enclitic, which appears to have the underlying form of =ǰa but only rarely surfaces exactly as such, follows the tense/modality enclitics; I look more closely into it in §7.2.

B.4.3.6 =eł, surprise

An enclitic =eł expresses surprise; I am unsure of its exact position in the 2nd position enclitic string but it occurs after the questioning enclitic =a and probably before the contrastive =*t*(a).

(1074) *Context: Stacey had thought that Pat's pet Fluffy was a dog, cat, or rabbit.*

siłəmeluχda Fluffyxλε?
 siłm=eλ=uχda Fluffy-xλ=a=a?
 snake=oh=3MED=DET Fluffy-name=a=INVIS
 “Fluffy’s a snake!”

(1075) *Context: I have just called the speaker on the phone after a long absence, and she responds...*

suweλa
 su=eλa
 be.2=oh
 “Oh, it’s you!”

There are various expressions that involve a λ in second position, that have no clear semantic or pragmatic core except that they might all fall under “affective”, “emotive”, or “expressive” speech (Kaplan, 1999; Potts, 2005; Schlenker, 2007). It is interesting to consider that many of these situations are ones in which the general “expressive” particle *nuk^w* of Nleʔkepmxcín (Littell and Mackie, 2014) would appear, although =λ enclitics are not nearly so ubiquitous nor as broad in their pragmatic range.

(1076) a. heʔaχulas laχa ʔug^waqala bəs
 he=aχul=as l=(a)χa ʔuk^{w-w}aqala-la bs
 be.3DIST=oh?=2 PREP=ACC different-ONGOING bus
 “You were on a different bus!”

b. ləmaχulas xəsamas χuχ Naomi
 l=ʔm=aχul=as xs-amas χ=uχ Naomi
 now=VER=oh?=2 lost-CAUS ACC=3MED Naomi
 “You lost Naomi!”

(1077) suʔəmχulas
 su=ʔm=χul=as
 be.2=VER=oh?=2
 “Oh, it’s you!”

(1078) nug^waniłxsłi?
 nug^wa-niłxs=ł=i?
 be.1-wish=oh=3_{DIST}
 “I wish I were her.”

(1079) heʔəmλa ʔik gənanəmi Madeleine
 he=ʔm=λa ʔik gn-_wanm=i Madeleine
 be.3_{DIST}=VER=oh good young-person=3_{DIST} Madeleine
 “Madeleine is the good child.”

This *dl* also occurs in the combination ʔołat', considered in §7.4.1, the use of which a speaker described as somewhat snarky or sarcastic.

B.4.3.7 Pronominal enclitics

After the enclitics above, but before the second-position questioning =*e* (§B.4.3.8), we find the subject pronouns.

	=ən	1st person
	=ənʔs	1st person inclusive
	=ənuʔx ^w	1st person exclusive
	=s	2nd person
(1080)	=k	3rd person proximal visible
	=gaʔ	3rd person proximal invisible
	=uǰ	3rd person medial visible
	=uʔ	3rd person medial invisible
	=iq	3rd person distal visible
	=iʔ	3rd person distal invisible

I do not often encounter these dedicated third person pronominal enclitics, except for an occasional clear instance of =*iʔ*, especially in pedagogical contexts.³⁸

(1081) yəx^wi?
 yx^w=i?
 dance=3_{DIST}
 “He/she/it [invisible] dances.”

³⁸It is also possible that the =*i* that I do hear is actually =*iʔ*, since Kwak'wala glottal stops are often not particularly strong.

In place of the dedicated pronouns, it is perhaps more common now to hear pronominal determiner sequences, minus their arguments, used as pronouns; =*da* is often (but not always) present in these sequences.³⁹

(1082) *ṁasgada*
ṁas=ga=da
 what=**3**PROX=**DET**
 “What’s **this** [proximal]?”

(1083) *ẇaciyuḥda*
ẇas-_hi=uḥ=da
 dog-NMZ=**3**MED=**DET**
 “**It** [medial] is a dog.”

(1084) *ṁacalida?*
ṁas-_hal=i=da
 what-kind=**3**DIST=**DET**
 “What’s **that?** (pointing way over there)” (Powell et al., 1981a, p. 10)

It appears that *gada* has, or is on its way to, being reanalysed as an independent word; it will sometimes receive its own stress, and sometimes is preceded by =*i*, as if *gada* were an adjective and =*i* were simply the non-medial deictic determiner.

Enclitic pronominal objects appear after subject enclitics, and after (if the subject is first-person) the connective element *ḷ*. Boas described these elements as follows (Boas et al., 1947, p. 252):

	= <i>oḷ</i>	2nd acc.		
	= <i>qək</i>	3rd proximal visible acc.		= <i>sək</i> 3rd proximal visible obl.
	= <i>ḥgaʔ</i>	3rd proximal invisible acc.		= <i>sgaʔ</i> 3rd proximal invisible obl.
(1085)	= <i>q^w</i>	3rd medial visible acc.		= <i>suḥ</i> 3rd medial visible obl.
	= <i>q^w, =quʔ</i>	3rd medial invisible acc.		= <i>suʔ</i> 3rd medial invisible obl.
	= <i>q</i>	3rd distal visible acc.		= <i>s</i> 3rd distal visible obl.
	= <i>qi</i>	3rd distal invisible acc.		= <i>si</i> 3rd distal invisible obl.

³⁹This use was also present in Boas and Hunt’s time – various examples can be seen in Boas et al. (1947, p. 259).

- (1086) $\acute{q}o\lambda a\acute{m}asa\check{x}^w$
 $\acute{q}o\lambda a=?m=a=s=(a)q^w$
 know=VER=QUES=2=ACC.3MED
 “Do you know him?”

The only ones of these I encounter with regularity are $=q^w$, $=q$, $=su\check{x}$, and $=s$; it should be noted that, due to the fricativization of stops in syllable-final position, this paradigm ends up being often indistinguishable from the prenominal accusative and oblique series (§B.6.2).

The first persons do not have enclitic accusative or oblique forms; rather, they have special forms based on $ga\check{x}$ (“come”):

- (1087) $ga\check{x}\acute{a}n$ 1st person accusative or oblique
 $ga\check{x}\acute{a}n\lambda s$ 1st person inclusive accusative or oblique
 $ga\check{x}\acute{a}nu\lambda\check{x}^w$ 1st person exclusive accusative or oblique

For some speakers, the second-person accusative $=o\lambda$ is uncommon except in its *l*-form, $lo\lambda$ (not to be confused with $lo\lambda$ “get, receive”). Instead, I encounter the second person possessive enclitic, serving the same function.

- (1088) $duq^w\acute{a}l\acute{a}n$ $\lambda u\lambda s$
 $dwq^w-l=n$ $\lambda=u\lambda s$
 see-ONGOING=1 CONN=2POSS
 “I see you.”

When there is an auxiliary, the object enclitics will come after the main predicate, rather than after the auxiliary as subjects do, which suggests their positioning is primarily syntactically than phonologically motivated.

- (1089) $\acute{k}i\lambda s\acute{a}n$ $w\acute{\lambda}\acute{a}l\acute{a}\check{x}$
 $\acute{k}i\lambda s=n$ $w\acute{\lambda}-l=(a)\check{x}$
 not=1 ask-ONGOING=ACC
 “I didn’t ask her.”

- (1090) $\acute{k}i\lambda s\lambda\acute{a}n$ $ni\lambda\lambda u\lambda s$
 $\acute{k}i\lambda s=\lambda=n$ $ni\lambda=(a)\lambda=u\lambda s$
 not=FUT=1 show=FUT=2POSS
 “I’m not telling you!”

When the first person would be immediately followed by an object pronominal or prenom-

inal enclitic, a λ intervenes.⁴⁰

- (1091) $h\acute{o}m\acute{x}\lambda id\acute{e}n$ $\lambda a\acute{x}a$ **papaqula**
 $hm-x\lambda id=n$ $\lambda=(a)\acute{x}a$ **papaqula**
 eat-CHANGE=1 CONN=ACC **sandwich**
 “I ate **the sandwich.**”

- (1092) $y\acute{o}lk^w\acute{e}n$ $\lambda as\acute{e}n$ $\lambda\acute{e}wige?$
 $ylk^w=n$ $\lambda=as=n$ $\lambda w-ik-_{w}ay?$
 hurt=1 CONN=OBL=1POSS so-back-NMZ
 “I hurt my back.”

(Powell et al., 1981c, p. 8)

Not all speakers retain this λ , and thus allow object enclitics directly on first person markers; some speakers retain it but sometimes leave it out, and accept sentences in which it does not occur.⁴¹

It is worth noting that contemporary material written by speakers usually treats λ as a separate orthographic word, and speakers talk about λ and its enclitics as if it were word with a meaning or use, calling it the “pointing word”; this term is also used in the seventh volume of the Kwak’wala textbook series (Powell et al., 1981f, p. 4). This “pointing” description might be due to the way that it hosts deictic enclitics $\lambda a\acute{x}ga$, $\lambda a\acute{x}ux$, etc., rather than any meaning inherent in λ itself. In any case, I follow speaker usage here in writing it as a separate word rather than encliticizing it to the first person subject.

B.4.3.8 Other questioning enclitics

Besides the questioning $=a$ that occurs directly following $=\lambda m$ (§B.4.3.4), there are additional enclitics that occur at the end of the enclitic sequence, $=e$ or occasionally $=i$, that seem to also indicate yes/no questionhood (§B.4.3.4).

⁴⁰According to Boas et al. (1947, p. 255), $=\acute{e}n\lambda$ is probably the historical form of the first person subject enclitic.

⁴¹One speaker who does not retain λ sometimes replaces it with an extra $\acute{x}a$, with the result that it appears that accusative has been marked twice.

- (i) $\lambda\acute{e}ml\acute{e}n$ $\acute{x}a\acute{x}g\acute{e}n$ $\lambda\acute{e}ml\acute{e}m\acute{x}$
 $\lambda ml=n$ $\acute{x}=(a)\acute{x}=g=n$ $\lambda ml-_{w}m=k$
 play=1 CONN=ACC=3PROX=1POSS play-NMZ=VIS.3PROX
 “I’m playing with my toy.”

- (1093) ḡəlqamase?
 ḡlqa=?m=a=s=e?
 swim=VER=QUES=2=QUES?
 “Do you swim?”
- (1094) ʔəḵʔexsdamase ḵa kafi?
 ʔḵ-_hexsda=?m=a=s=e ḵa kafi?
 do-want=VER=QUES=2=QUES ACC coffee?
 “Do you want coffee?”
- (1095) ḳutəlaʔuḵe
 ḳutla=a=uḵ=e
 fish=QUES=3MED=QUES
 “Is that a fish?”

The =*e* is very common after second-person subjects, but does not solely occur there. I suspect that it is meaningful – that is, that there is some pragmatic difference between =*e* questions and those without =*e* – but I cannot determine what it signifies. One speaker judged (1096b) to be better than (1096a), but both =*a=s* and =*a=s=e* occur frequently.

- (1096) a. dag^wadamas
 dag^wada=?m=a=s
 doctor=VER=QUES=2
 “Are you a doctor?”
- b. dag^wadamase
 dag^wada=?m=a=s=e
 doctor=VER=QUES=2=QUES
 “Are you a doctor?”

There is also occasionally a sentence-final =*e* or =*a*, also seeming to express yes/no questions.

- (1097) ẉeḷmas ṇəmug^wad gaḵəne
 ẉeḷ=?m=a=s ṇmuk^{w-w}ad gaḵ=n=e
 can=VER=QUES=2 friend-REL come=1=QUES
 “Can you be my friend?”

- (1098) $\dot{q}\acute{o}\lambda\acute{a}m\acute{a}n\acute{s}\acute{e}\check{x}$ $\text{ʔ}\acute{e}\check{x}\text{ʔ}as\acute{s}\acute{e}n$ $\text{ʔ}\acute{e}b\acute{e}m\text{p}\acute{e}\text{ʔ}a$
 $\dot{q}\acute{o}\lambda a=?m=a=s=e=\check{x}$ $\text{ʔ}\acute{x}\text{-}_w as=s=n$ $\text{ʔ}b\text{m}\text{p}=a=a=a$
 know=VER=QUES=2=QUES=ACC do-PLACE=OBL=1POSS mother=POSS=INVIS=QUES
 “Do you know where my mother is?”

B.4.4 Prenominal and postnominal enclitics

There are two sequences of determiner-like enclitics associated with sentential arguments, rather than with the sentence itself: the “prenominal” and “postnominal” enclitics. It should be noted, however, that Boas’s terms “prenominal” and “postnominal” do not necessarily mean “before/after noun stems”, but “before/after arguments”; the arguments themselves might be verbal in origin, or adjectival, or clausal.

The “prenominal” enclitics, encoding categories like case, deixis, possession, and (something like) definiteness, precede the noun (or adjective or verb, as the case may be) and are realized as part of the preceding phonological word, whatever that word may be. The “postnominal” enclitics, encoding visibility, deixis, and possession, occur in second position after the first word of the argument phrase.

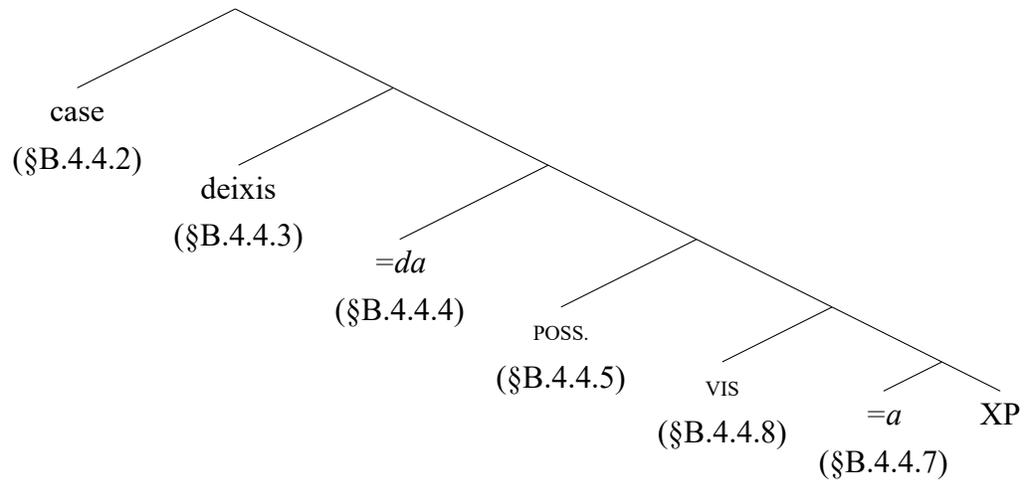
For example, the =*i* in (1099) is the prenominal enclitic for *buk^w* (“book(s)”), indicating that it is in nominative case and is deictically distal, while =*εʔs* is a sequence of postnominal enclitics indicating that the books are not present and are possessed by a third person.

- (1099) $yud\acute{e}x^w i$ $buk^w \epsilon\text{ʔ}s$
 $yudx^w=i$ $buk^w=a=a\text{ʔ}=s$
 three=3DIST book=POSS=INVIS=3POSS
 “He has three books.” (Lit: “His books are three.”)

I assume a similar account and structure to that in Chung (2007), in which Kwak’wala determiner phrases have an “articulated” skeleton wherein each enclitic occupies a functional head.⁴²

⁴²I am not sure where postnominal possessives like =*uʔs* and =*s* go, whether they are all in the same position, and how they are “accumulated”. It may be that the first and second person possessive postnominals are second-position postnominals the same way visibility enclitics are, while the third person possessive postnominal works is a phrase-final postnominal, or the prenominal determiner of the possessor.

(1100) a.



The first word of the XP then undergoes head-to-head raising, accumulating the postnominal enclitics after it Chung (2007, p. 114–117).

B.4.4.1 Enclitics on short words

There is one systematic exception to the positioning of prenominal enclitics: when a DP occurs after a small class of short words (including some of the copulas described in Chapter 4 and certain instances of the locative element *la* described in §4.4.1)⁴³, and these short words are not the initial word of the sentence, we can observe that certain prenominal enclitic determiners (like the first person possessive =*ən* and third person =*uǰ* and =*i*) can “separate” from their DP and occur *before* the short word.

- (1101) $\dot{k}iyos\dot{m}\dot{a}n$ *la* **siʔsasəma**
 $\dot{k}yus=?m=n$ *la* **sʔ-sasma**
 none=VER=1POSS now REDUP-offspring
 “I don’t have any kids yet.” (Lit: “My children are currently none.”)

⁴³In the case of *la*, its appearance as [ləʔe] or [leʔe], as if a distal element followed, is very common even when we would expect a different inflection or no inflection. Once in a while, a form that we might expect (like *loʔoǰ*) appears instead, but in general this occurs as *ləʔe* ~ *leʔe* and should probably be treated as a whole.

I nonetheless gloss it as if it had a distal third person.

B.4.4.2 Case

Nominative case in Kwak’wala is unmarked, but there are two case morphemes, $=\check{x}(a)$ and $=s(a)$, that are used before non-subject arguments. I term them the **accusative** and **oblique**, and gloss them as ACC and OBL, respectively, although it should be emphasized that these terms are just descriptive; they do not necessarily correspond to accusative and oblique, or direct and indirect object, in other languages.

Direct objects of transitive verbs are usually marked with $\check{x}(a)$, with \check{x} being used for proper names, some nonspecific arguments, and arguments in which an enclitic beginning with a potential syllabic nucleus follows (like the first-person possessive $=n$ or the third-person distal $=u\check{x}$ ⁴⁴). Otherwise, $\check{x}a$ is used.

- (1107) $\acute{w}el\?əms \quad da\check{x}\?i \quad \check{x}a \quad kuki$
 $\acute{w}el=\?m=s \quad da-x\?id \quad \check{x}a \quad kuki$
 can=VER=2 take.in.hand-CHANGE ACC **cookie**
 “You can take **a cookie**.”

- (1108) $\acute{k}əp\acute{i}dida \quad bəg^w anəm \quad \check{x}a \quad g^w ag^w a\?l$
 $\acute{k}p-x\?id=i=da \quad bg^w anm \quad \check{x}a \quad g^w ag^w a\?l$
 scissor.motion-PART=3DIST=DET man ACC **paper**
 “The man cut **the paper**.”

- (1109) $lə\?əxdən \quad ma\acute{l}tega \quad \check{x}ən \quad \acute{n}əmuk^w$
 $l=(a)xd=n \quad ma\acute{l}tega \quad \check{x}=n \quad \acute{n}m-uk^w$
 then=REC.PAST=1 recognize ACC=1POSS **one-person**
 “Then I met (lit: recognized) **my friend**.”

- (1110) $lalu\acute{l}u\check{x} \quad \check{x}u\check{x} \quad həmumu\check{x}$
 $la-lo\acute{l}-\?=u\check{x} \quad \check{x}=u\check{x} \quad hmumu=q$
 REDUP-get-try=3MED ACC=3MED **butterfly=VIS**
 “She’s trying to catch **the butterflies**.”

- (1111) $duq^w\?a\lambda amase\check{x} \quad Laura \quad \check{x}^w a \quad \acute{n}ala\check{x}$
 $dwq^w-g\?a\lambda=\?m=a=s=e=\check{x} \quad Laura \quad \check{x}^w a \quad \acute{n}ala=q$
 see-discover=VER=QUES=2=QUES=ACC **Laura** ACC.3MED **day=VIS**
 “Have you seen **Laura** today?”

⁴⁴There is also a portmanteau form for $\check{x}=u\check{x}$, $\check{x}^w(a)$.

When the \check{x} element has a following nucleus – that is, when it is not just the proper \check{x} on its own – it can serve as a word on its own; it can be preceded by pauses, and can occur in a left-dislocated position with nothing before it (§B.6.5). However, it can also encliticize to the previous word; when it does, it is preceded when appropriate by the epenthetic enclitic *a*.

- (1112) $\text{du}\check{\text{g}}^{\text{w}}\text{alida}$ $\text{c}\acute{\text{e}}\text{daqa}\check{\text{x}}\text{a}$ $\text{k}\acute{\text{a}}\text{t}\acute{\text{a}}\text{m}\text{ak}^{\text{w}}$
 $\text{dwq}^{\text{w}}\text{-}_w\text{l=i=da}$ $\text{c}\acute{\text{e}}\text{daq}=(\text{a})\check{\text{x}}\text{a}$ $\text{k}\acute{\text{a}}\text{t}-(\check{\text{g}})\text{m-}_w\text{ak}^{\text{w}}$
 see-discover=3DIST=DET woman=ACC write-face-PART
 “The woman saw **the picture.**”

Meanwhile, some arguments – particularly instruments, things worn, carried, or moved, and the theme argument of ditransitive verbs like “give” – use *s* or *sa*, with the choice of these determined by the same conditions as $\check{x} \sim \check{x}a$. While it is tempting to call these “indirect objects”, it should be emphasized that these objects do not necessarily correspond to English indirect objects; as Boas et al. (1947, p. 285) note “The number of cases in which the object is used in an action is expressed by the instrumentalis [read: oblique] is very large. In most of these we rather conceive the action as done to the object. We say ‘I pour water into the dish.’ The Kwakiutl prefers ‘I pour with water into the dish.’ On account of the use of the indirect object when the verb carries the instrumental, it remains doubtful whether in this case the dish should be considered psychologically as direct or indirect object.” (cf. Sardinha and Davis, 2011).

- (1113) $\text{k}^{\text{w}}\text{i}\check{\text{x}}\text{?idida}$ $\text{b}\acute{\text{e}}\text{g}^{\text{w}}\text{an}\acute{\text{a}}\text{m}\check{\text{a}}\check{\text{x}}\text{a}$ $\text{q}\acute{\text{a}}\text{sa}\text{s}\text{?s}$ $\text{t}\acute{\text{i}}\text{lwa}\check{\text{g}}\text{ayu}$
 $\text{k}^{\text{w}}\text{i}\check{\text{x}}\text{-x}\text{?id=i=da}$ $\text{bk}^{\text{w}}\text{-}_w\text{anm}=\text{a}\check{\text{x}}\text{a}$ $\text{q}\acute{\text{a}}\text{sa}=\text{s}=\text{i}\text{?s}$ $\text{t}\acute{\text{i}}\text{lwaq-}_w\text{ayu}$
 club-CHANGE=3DIST=DET man-person=ACC sea.otter=OBL=3POSS.REFL club-INSTR
 “The man clubbed the sea-otter **with his club.**” (Boas et al., 1947, p. 282)

- (1114) hedi $\text{s}\text{i}\text{l}\acute{\text{a}}\text{m}$ $\text{ga}\check{\text{x}}$ sa $\text{n}\acute{\text{a}}\text{n}\acute{\text{q}}\text{uma}$
 he=d=i $\text{s}\text{i}\text{l}\text{m}$ $\text{ga}\check{\text{x}}$ sa $\text{n-nq-}_h\text{uma}$
 be.3DIST=VER=3 snake come OBL REDUP-drink-NMZ
 “It’s the snake who brought **the drinks.**” (rough lit: “came **with drinks**”)

$=s(a)$ is also used to indicate third-person possession, either with an overt DP, with a pronoun, or on its own, but it should probably not be conflated with the oblique $=s(a)$ synchronically. The oblique $=s(a)$, when enclitic, conditions epenthetic enclitic *a* (§B.4), while possessive $=s(a)$ does not. This suggests that the third-person possessive $=s$ is not just an oblique determiner on the following DP, but actually “belongs” to the previous DP as one of its postnominal (or post-phrasal) enclitics.⁴⁵ That is to say, this $=s$ seems to be head-marking, rather

⁴⁵The *a* component of $=s(a)$, which is most likely its own morpheme, could still be a prenominal enclitic of the

than dependent-marking.

- (1115) $\dot{w}alasu\check{x}$ $guk^w a\check{x} s$ **Masaki**
 $\dot{w}alas=u\check{x}$ $guk^w=a=q=s$ **Masaki**
 $big=3_{MED}$ $house=POSS=VIS=3_{POSS}$ **Masaki**
 “Masaki’s house is big.”

B.4.4.3 Deixis

Third-person arguments are systematically distinguished according to **deixis** – that is, the category that distinguishes “this” and “that” in English. There are three deictic categories in Kwak’wala:

- **Proximal** arguments, marked with $=ga$ (1116), are those very near the speaker, very often ones they are touching, holding, or pointing to.
- **Medial** arguments, marked with $=u\check{x}$ (1117), are those that are present in the current speech context but not necessarily right near the speaker.
- **Distal** arguments, marked with $=i$ (1118), are usually absent from the current speech contexts, but are sometimes just far away, or further away than other objects. The distal category also contains things where the speaker does not know where they are, things that existed only in the past or do not yet exist, and things that exist only abstractly (names, reasons, etc.).

- (1116) $\text{?}\text{əm}\text{?}\text{əme}\text{?}ga$ $\lambda o\text{?}six$ $la\check{x}ada$
 $\text{?}m\text{-?}m\text{-}a\acute{y}=ga$ $\lambda a\check{x}^w\text{-?}s=ik$ $l=(a)\check{x}a=da$
 $REDUP\text{-}small\text{-}NMZ=3_{PROX}$ $stand\text{-}on\text{-}ground=VIS.3_{PROX}$ $PREP=ACC=DET$
 “These trees [pointing to some trees] are smaller than the others.”

- (1117) $hanik\text{ə}lu\check{x}da$ $\acute{c}\text{ə}daq\text{ə}\check{x}$
 $hanik\text{-}l=u\check{x}=da$ $\acute{c}\text{ə}daq=q$
 $play.with.boat\text{-}ONGOING=3_{MED}=DET$ $woman=VIS$
 “The woman [over there] is playing with a little boat in the water.”

following phrase.

- (1118) $yəx^w i$ **Barbara**
 $yx^w=i$ **Barbara**
dance=3DIST **Barbara**
“**Barbara** [not present] dances.”

The proximal =*ga*, especially when in combination with the determiner =*da*, is often pronounced as if it were a separate word – that is, as *gáda*, and transcriptions frequently treat it as a separate orthographic word (e.g. Powell et al., 1981a, p. 4).

Deictic specification is obligatory for subjects, but other arguments need not have an overt deictic specification; *ǰa* can, for example, be used for objects that are either present (i.e., those that would ordinarily be marked as medial) or absent (i.e., those that would ordinarily be marked as distal). The distal non-subject determiner strings $\check{x}=i$, $\check{x}=i=da$, $s=i$, $s=i=da$ are quite rare; these are ordinarily expressed *ǰa*, *ǰada*, *sa*, *sada*.

Boas et al. (1947) describe a somewhat more exotic system, as if the three categories indicate what person (the speaker, the hearer, or someone else) the object in question were closest to, but it is probably better to take Boas’s claim as an impressionistic description, often but not always true, rather than taking it as describing the necessary and sufficient conditions for the use of the three categories. Speakers will, for example, generally refer to entities that are present but out of reach as medial, regardless of which discourse participant is closest, and entities do not seem to change deictic category when different hearers are addressed. In my own data, and in other post-Boas descriptions of deixis (Levine, 1977; Stewart, 2011; Black, 2012; Nicolson, 2013), speakers appear to use a more typologically familiar “three-value, one anchor” system (near speaker, further from speaker, far away from speaker), of the sort that is familiar from, for example, Spanish.

The deictic class of an entity is not fixed, and can change as the discourse proceeds (cf. Black, 2012); in particular, proximal elements often shift to medial after introduction.

- (1119) a. $gamən$ $\dot{q}^wəli?$ *gada*.
 $ga=ʔm=n$ $\dot{q}^wli?$ *ga=da*
be.3PROX=VER=1 uncle 3PROX=DET
“**This** [proximal] is my uncle.”

- b. $yuʔəm$ $wa\dot{q}^wasən$ $ʔəbəmp$
 $yu=ʔm$ $wa\dot{q}^wa=s=n$ $ʔbmp$
be.3MED=VER older.sib=3POSS=1POSS mother
“**He’s** [medial] my mother’s brother.”

(Goodfellow et al., 1991, p. 75)

(1120) a. gaʔəms gəʔelas gada
 ga=ʔm=s g-wił-was ga=da
 be.3PROX=VER=2 put-indoors-PLACE 3PROX=DET
 “This is your bed.”

b. yuʔəmls miǰaλuǰ
 yu=ʔam=ł=s miǰ=(a)λ=uǰ
 be.3MED=VER=FUT=2 sleep=FUT=3MED
 “This is where you will sleep.”

(Goodfellow et al., 1991, p. 121)

When no deictic enclitic occurs – that is, when a stem would appear “bare” – an [a] occurs.

(1121) k̄isən ǰəlsa
 k̄is=n ǰls=a
 not=1 paint=A
 “I’m not painting.”

As with all such [a]’s in Kwak’wala, it is difficult to pin down exactly what it represents.⁴⁶ Boas et al. (1947, p. 290) treated the [a] that we see in (1121) as one of Kwak’wala’s aspects, generally used for single actions or continuous states that take neither *-(ə)la* or *-xʔid*. This may be so, although I do not think that this [a] is independently meaningful in that way, but is just a default in the absence of a more specific aspectual interpretation. For one, we can observe that the [a] that ends *-(ə)la* is not a part of this suffix when we look at the effect of mutating suffixes, which act on the /l/ itself; moreover [a] can occur on *-xʔid* in the right syntactic circumstances.

We could also treat this [a] as an “unmarked” deictic status, similarly to how *ǰa(da)* and *sa(da)* have largely supplanted the expected accusative and oblique distal *ǰi(da)* and *si(da)*. It is not uncommon to encounter sentences with no apparent subject and only [a] on the predicate (1122), but some sentences would not be compatible with the hypothesis that these are just sentences with no subject at all: (1123) has the rest of the subject, but merely lacks deictic specification.

⁴⁶It should be emphasized, however, that this [a] occurs in place of the deictic enclitics; it is not underlyingly present and eliminated in hiatus. Since alternations like *ǰəlsa ~ ǰəlsən ~ ǰəlsuǰ ~ ǰəlsi* are ubiquitous and easy to observe in Kwak’wala, it may seem that the vowel hiatus rules of Kwak’wala are just that /a/ is dropped whenever another vowel (or plain resonant nucleus) follows. However, in §A.5.3 I observed that realization of /a/ in hiatus with other vowels/resonants is complicated but systematic; [a] is often not present in the output but nonetheless has observable effects. These effects (like lowering of high vowels) do not occur in words like *ǰəlsi*, and in consequence it is more consistent to treat such forms as *ǰəls+i* rather than *ǰəlsa+i*.

We might want to treat this [a] as the same as the epenthetic [a] that occurs before enclitics – that is, as if these words ended in a null enclitic and [a] occurs in between them.

(1122) yiʔyəx^wa
 yý-yx^wa
 REDUP-dance=A
 “They are dancing.”

(1123) dənǰələda cik^wabidu
 dnǰ-l=a=da ǰik^wa-bidu
 sing-ONGOING=A=DET seagull-DIMIN
 “The little bird is singing.”

B.4.4.4 =da

The prenominal enclitic =da is particularly difficult to characterize; it is something like a definite article, but pinning down the conditions of its use proves difficult. While Chung (2007) describes =da as indefinite – it does not co-occur with proper names or possessed entities, which are presumably definite – there is also the problem that Boas et al. (1947) describe indefinite nouns as being preceded by the lack of =da, and we can in any case observe numerous instances of =da where the entity would presumably be definite.⁴⁷

(1124) a. wǰigilaxduǰ da babəg^wəm?
 wý-gi-l=(a)xd=uǰ da ba-bk^w-_wm?
 what-do-ONGOING=REC.PAST=3MED DET REDUP-man-DIMIN
 “What was the boy doing?”

b. ʔox^wsemuǰda babəg^wəmǰ k^wała la ǰa ceya.
 ʔwa=xse=ʔm=uǰ=da ba-bk^w-_wm=q k^w-ała la ǰa ceya.
 so=still=VER=3MED=DET REDUP-man-DIMIN=VIS sit-ONGOING.POS PREP ACC chair
 “The boy is still sitting on the chair.”

It would be difficult, under any definition of “definite”, to have =uǰda babəg^wəm in (1124b) be indefinite. Instead, I concur with Black (2012) that it does not itself represent a definite/indefinite distinction; I gloss it as DET for “determiner” without making any particular claim what aspect of a determiner it represents.

It is also worth noting that =da does not mean “the”, even though it is often used in circum-

⁴⁷It should be noted that while Chung sets up the glosses “InDet” and “Det” for “InDefinite” and “Definite” – the discussion suggests that these are meant to correspond to “indefinite” and “definite” – both =da and the lack of =da are glossed as “Det” throughout (e.g. Chung, 2007, p. 106).

stances in which English speakers use “the”, and shares some aspects of its distribution (like non-occurrence with proper names, and non-occurrence with possessives). =*da* does not seem to require that its argument is specific, or unique, or has occurred previously in the discourse, or identifiable by the listener, or even identifiable by the speaker.

- (1125) $\dot{q}ux\acute{c}olux\check{x}$ he $\check{g}w\acute{e}lida$ $\dot{q}i\dot{q}\acute{\epsilon}d$
 $\dot{q}ux-\acute{c}o-l=i\check{x}$ he $\check{g}^wi-a\acute{l}=i=da$ $\dot{q}i-\dot{q}i-wad$
dress-in-ONGOING=3MED be.3DIST whatever-ONGOING.pos?=3DIST=DET REDUP-many-REL
“He was dressed just like a rich man.”

The referent can be new to the discourse; in (1126) this is the first mention of killer whales in this book, let alone killer whales that are seen passing Alert Bay.

- (1126) $\dot{q}in\acute{e}mida$ $ma\check{x}\acute{?}inu\check{x}^w$ $du\check{g}^w\acute{a}l$ $heqala\check{x}$ $\acute{y}\acute{e}lis$
 $\dot{q}inm=i=da$ $ma\check{x}\acute{?}inu\check{x}^w$ $dwq^w-w\acute{l}$ $heq-ala=\check{x}$ $\acute{y}lis$
many=3DIST=DET orca see-STIM PASS.by-ONGOING=ACC Alert.Bay
“Many killer whales are seen passing Alert Bay.” (Lit: “The killer whales that are seen passing Alert Bay are many.”) (Goodfellow et al., 1991, p. 19)

It is often used in circumstances where the listener could not have known about the referent in advance.

- (1127) *Context: Two speakers are looking at different pictures; one speaker is describing to the other speaker what is in her picture.*

$t\acute{e}minasida$ $\acute{k}^wa\acute{a}la$ $la\check{x}a$ $ha\acute{m}ad^zu$
 $tminas=i=da$ $\acute{k}^w-a\acute{a}la$ $l=(a)\check{x}a$ $ha\acute{m}a-wd^zw$
squirrel=3DIST=DET sit-ONGOING.pos PREP=ACC food-surface
“There’s a squirrel sitting on the table.” (Lit: “That sitting on the table is a squirrel.”)

- (1128) *Context: Same situation as the above example.*

$duq^w\acute{e}l\acute{e}n$ $\acute{\lambda}a\check{x}eda$ guk^wbidu
 $dwq^w-l=n$ $\acute{\lambda}=(a)\check{x}=i=da$ guk^w-bidu
see-ONGOING=1 CONN=ACC=3DIST=DET house-DIMIN
“I see a little house.”

It does not even mean that the speaker can identify the referent; =*i=da* is frequently the determiner string for the subjects of questions.

- (1129) ʔəŋg^wida həməxʔidəʔ ʃa kʉtəla
 ʔŋg^w=i=da hm-xʔid=a=aʔ ʃa kʉtla
 who=3_{DIST}=DET eat-CHANGE=a=INVIS ACC salmon
 “Who ate the fish?”

- (1130) *Context: We had been playing “Guess what animal I am”, and a new player came in and joined the game. His secret animal was the squirrel, but someone earlier had chosen a squirrel as well. After the animal is revealed, a speaker is wondering if anyone can remember who the other squirrel had been.*

- ʔəŋg^wida ɳəmux^wdəʔ təminasa
 ʔŋg^w=i=da ɳm-uk^w=xd=a=aʔ tminas=a
 who=3_{DIST}=DET one-person=REC.PAST=a=INVIS squirrel=a
 “Who was the other squirrel?” (Lit: “The other squirrel was who?”)

It may require that the speaker knows that the argument *exists* – the complements of *kəyos* (“no, none, there is not any”) do not take =*da*, or deixis or case for that matter – but this would not really explain the distribution of =*da*, since most arguments would have this property.

In my own data the best predictor for =*da*, at least for subjects, is the absence of possession (cf. Boas et al., 1947, p. 259); nearly every non-possessed subject that is not a proper noun receives =*da*, while few possessed subjects receive =*da*.

- (1131) a. ʔəŋg^wi ǰənəməʔs Regis
 ʔŋg^w=i ǰnm=a=aʔ=s Regis
 who=3_{DIST} wife=a=INVIS=3_{POSS} Regis
 “Who is Regis’s wife?”

- b. ʔəŋg^wida gəl^htəʃstəǰaweʔ?
 ʔŋg^w=i=da glt-_hʃst=aǰaway
 who=3_{DIST}=DET long-end=more
 “Who is taller?”

- (1132) a. məlúk^wi sasəməʔs Henry
 mʔl-uk^w=i sasm=a=aʔ=s Henry
 two-person=**3**DIST offspring=POSS=INVIS=OBL Henry
 “Henry has two children.” (Lit: “Henry’s children are two.”)
- b. məlúk^wida ʔəmla, ləmis wíla dulo
 mʔl-uk^w=i=da ʔmla, l=ʔm=is wíla dulo
 two-person=**3**DIST=**DET** play, go=VER=and complete win
 “Two people played [a game show on television].” (Lit: “Those that played were two.”)

Like English “the”, =*da* does not co-occur with proper names; “Pat” is just =*i Pat* rather than =*ida Pat*.

Very occasionally, a sentence occurs in which the prenominal possessive enclitic does not occur, and only the postnominal possessive enclitic occurs; in such sentences =*da* can be found.

- (1133) noğadida q̣^wəlyak^wəğexdaʔx̣^wus
 noq-_wad=i=da q̣^wls-_wak^w-_hagay=xdaʔx̣^w=us
 heart-REL=**3**DIST=**DET** old-NMZ-more?=PL=**2**POSS
 “Your elders are wise.” (Goodfellow et al., 1991, p. 83)

This does not hold up, however, for the use of =*da* in non-subjects; it is not unusual to see non-possessed objects without =*da*.

- (1134) dux̣^wʔedas x̣a mig^wat
 dwq^w-xʔid=as x̣a mig^wat
 see-CHANGE=**2** ACC seal
 “Look at the seal!”

- (1135) ʔəx̣ʔiʔi Jackie x̣a nənquma
 ʔx̣-xʔid=ʔ=i Jackie x̣a nnquma
 do-CHANGE=**FUT**=**3**DIST Jackie ACC drinks
 “Jackie will bring drinks.”

Moreover, presumably something determines the choice of =*ux̣* or =*ux̣=da* for the third person medial pronoun, =*i* or =*i=da* for the third person distal pronoun, etc., even when no overt argument follows, so it cannot simply be a grammatical property like having a possessor.

Black (2012) suggests that =*da* might be encode something like *ostension*, that component of “this” or “that” aside from its deictic category or definiteness, in a sense as if =*da* were the

linguistic equivalent of pointing or gesturing. I think an account along these lines is promising, and captures something important about the use of =*da*, but I should note that I have also encountered sentences where the speakers are actually pointing to something and =*da* does not appear.

(1136) *Context: The speaker is pointing out differences between two pictures.*

ʔug ^w aqalaga	liʔloʔsix
ʔug ^w aq-ała=ga	λý-λaǰ ^w -ʔs=ik
different-remain=3PROX REDUP-stand-on.ground=VIS.3PROX	
laǰga	ńəmX
l=(a)ǰ=ga	ńm=k
PREP=ACC=3PROX one=VIS.3PROX	

“The trees are different from those.”

B.4.4.5 Prenominal possessive enclitics

We also find, in the same apparent enclitic slot as =*da*, a series of prenominal person markers that indicate the argument’s possessor, as well as agents of passive and nominalized clauses.

(1137) mələk^wən **sasəm**
 mʔl-uk^w=n **sasm**
 two-person=1POSS **offspring**
 “I have two children.” (Lit: “**My children** are two.”)

(1138) walasən ʔiyaxəla ǰən ʔuq^wineʔ
 walas=n ʔiyax-la ǰ=n ʔuq^w-_hinay^ʔ
 big=1POSS work-ONGOING ACC=1POSS **body-NMZ**
 “I’ve really been working out.” (Lit: “I’m really working **my body**.”)

There are two variants of the second person possessive prenominal, =*uʔs* and =*iʔs*; while these seem to be portmanteaus built on the medial and distal prenominals, respectively, and were described in (Boas et al., 1947, p. 254) as expressing medial and distal deixis, they currently seem to be in free variation. For example, repetitions of sentences will often flip from one to another, and moreover we can see in (1140) that =*iʔs*, which we might expect to be a marker of distal deixis, co-occurs with the third person *medial* visible postnominal, suggesting that whatever they are, =*uʔs* and =*iʔs* do not currently serve to distinguish medial and distal.

(1139) *mácaʎuʎs* *hə́meʎ*
más-_hat=uʎs *hm-ayʎ*
 what-kind=2POSS eat-NMZ
 “What kind of food do you have?” (Lit: “**Your food** is what-kind?”)

(1140) *másiʎs* *q̣idəmequʎs*
más=iʎs *q̣it-_wm=a=a=q=uʎs*
 what=2POSS sport.fish-NMZ=a=a=VIS=2POSS
 “What did you catch [by rod and reel]?” (Lit: “**That which was caught by you** is-what?”)

The prenominal possessive enclitics can be, but do not need to be, matched with corresponding postnominal possessive enclitics after the argument (§B.4.4.9).

Arguments possessed by third persons do not receive special prenominal possessive enclitics; they just receive the normal set of prenominal enclitics (e.g., =u \check{x} , =i, etc.).

There is, however, a special “reflexive” third person possessive prenominal =iʎs that is used whenever the possessor of the argument is coreferential with (usually) the sentence’s grammatical subject (Boas et al., 1947; Anderson, 1984), and sometimes the thematic subject of a passivized verb (Sherer, 2014, p. 31–33). This is built on distal =i or =iʎ, and in Boas’s time (Boas et al., 1947, p. 254) there were proximal and medial forms as well, but I have only ever encountered the distal form, regardless of the deictic category we might expect the argument to take.

(1141) *ḳəʎəlu \check{x} da* *lemənʎstu \check{x}* *bəg^wanəm* *ḥiʎs* *g^wəsu*
ḳl-l=u \check{x} =da *lemn-ʎstu=q* *bk^w-_wanm* *ḥ=iʎs* *g^wsu*
 carry-ONGOING=3MED=DET lemon-eye=VIS man-person ACC=3POSS.REFL pig
 “The yellow man is carrying his pig.”

(1142) *ḳiʎsu \check{x}* *q̣əʎu \check{x}* *Jonə \check{x}* *ḥiʎs* *ḡ^wigilas*
ḳiʎs=u \check{x} *q̣əʎ=u \check{x}* *Jon=q* *ḥ=iʎs* *ḡ^wi-gi-l-_was*
 not=3MED know=3MED Jon=VIS ACC=3POSS.REFL INDEF-do-ONGOING-PLACE
 “Jon doesn’t know what he’s doing.” (Lit: “Jon doesn’t know his behavior.”)

We do, however, find instances of =iʎs for which “coreference with the subject” cannot have been the criterion for their use. In (1143), the argument in question is =iʎs *ḡ^wigilas* (“her behavior/accomplishments”), and the coreferent is the oblique object (“my granddaughter”), rather than the subject (“I”).

B.4.4.6 Postnominal tense

As noted in §B.4.3.3, since many arguments appear to be of clausal origin, tense frequently occurs in arguments. In fact, it is not uncommon to encounter sentences about the past or future where the only indication thereof is in an argument.

- (1145) ʔəng^wida wosλεʔ
 ʔng^w=i=da wos=λ=a=aʔ
 who=3DIST=DET sad=FUT=a=INVIS
 “Who will be sad?” (Lit: “The future sad one is who?”)

- (1146) yu^mən wayasλuǎ Katie
 yu=ʔm=n wayas=λ=uǎ Katie
 be.3MED=VER=1POSS sweetheart=FUT=3MED Katie
 “Katie will be my sweetheart.” (Lit: “Katie is my future-sweetheart.”)

It is entirely possible for sentences such as (1146) to have *yuʔəmλən* (“will be my...”) rather than *yumən* (“is my...”); on the other hand, leaving out the tense on *wayas* was immediately rejected (“She’s not your girlfriend *yet!*”).

Chung (2007) proposes that tense suffixes on nouns are part of a postnominal category of temporal deixis within the DP, comparable to spatial deixis or visibility deixis. In §3.3.3.2, I examine some of the morphology of these “tensed nouns” and suggest that it may be better to treat them as being of clausal origin. (That is, to say that these are headless relative clauses with a nominal predicate, and tense specification, rather than say that tense is a category of nominal inflection.) Morphologically, tensed nouns are treated more like verbal and clausal arguments than they are treated like ordinary nominal arguments (cf. Jacobsen, 1979). Furthermore, tense in a DP can occur multiple times, as it does in clauses (§B.4.3.3); it does not, as other post-nominals do, occur only once, suggesting that this =λ is the same category as the clausal tense marker and that these arguments are clausal in origin.

- (1147) məsi ʔiʔsiλəʔoʔs la yaq̣ənṭəmaλǎ
 məs=i ʔiʔs=λ=a=uʔs la yaq̣nt-k-(ǧ)m=(a)λ=(a)ǎ
 what=3DIST not=FUT=a=2POSS now speak-sound-face=FUT=ACC
 “Then why not go talk to her?”

B.4.4.7 Postnominal possessive =a

Before certain visibility enclitics, there occurs an unexpected [a] when the argument is possessed, even when such an [a] would not be phonologically necessary. For example, the postnominal medial visible enclitic is just =q when the argument is not possessed, but =aq when it is. I treat this as a separate morpheme.

- (1148) a. ʔom̩isuḥ ḥəntaluḥda busiḥ
 ʔwa=ʔm=is=uḥ ḥnt-(k)_ha-l=uḥ=da busi=q
 so=VER=and=3MED snore-sound-ONGOING=3MED=DET cat=VIS
 “**But the cat** just sleeps.”
- b. ɸiʔɸinəmuḥ biʔbusiyaḥsuḥ Pat
 ɸy-ɸinm=uḥ bɸ-busiy=a=q=s=uḥ Pat
 REDUP-many=3MED REDUP-cat=a=VIS=3POSS=3MED Pat
 “Pat has a lot of cats.” (Lit: “Pat’s **cats** are many.”)

While I rarely see the postnominal distal invisible enclitic =aʔ, I frequently encounter =eʔ, which is probably the sequence =a=aʔ (§A.5.3).

- (1149) mačali ʔiyaḥʔinaɸeʔsa čədaq
 mas-_hal=i ʔiyaḥ-ʔinaɸ=a=aʔ=s čdaq
 what-kind=3DIST work-NMZ=a=INVIS=3POSS woman
 “**What does the woman do for a living?**” (Lit: “The woman’s job is what?”)

- (1150) sačəmxəʔe loʔanəmeʔs
 sas-_{eh}m=ḥa=i la-w-ʔ-_wanm=a=aʔ=s
 spring.salmon-genuine=ADD.FOC=3DIST go-out-obtain-obtained=POSS=INVIS=3POSS
 “**She also caught a spring salmon.**” (Lit: “Her catch is spring salmon, too.”)

B.4.4.8 Postnominal visibility enclitics

Kwak’wala arguments are marked with a series of postnominal enclitics indicating visibility; Boas et al. (1947, p. 252–254) provide them as follows:

- (1151)
- | | |
|----------------------------|-------------------------------|
| = <i>k</i> | 3rd person proximal visible |
| = <i>ga</i> | 3rd person proximal invisible |
| = <i>iǰ</i> | 3rd person medial visible |
| = <i>aǰ</i> , = <i>aǰ'</i> | 3rd person medial invisible |
| – | 3rd person medial visible |
| = <i>a</i> | 3rd person distal invisible |

As with other deictic elements in Kwak'wala, I do not encounter this system in its full complexity; for the most part, I encounter a distinction between proximal visible =(*i*)*k* (usually =(*i*)*x*)⁴⁸, medial visible =*q* (usually [=ǰ]), and distal invisible =*a*? (usually =*ε*?).⁴⁹

While traditionally the presence or absence of the distal =*a*? corresponded with the visible/invisible distinction, I rarely encounter =*a*? on ordinary nominal arguments regardless of their visibility status.⁵⁰

- (1152)
- | | |
|-------------|---------------------------|
| wiʔstugən | ǰəsʔəneʔx |
| wy-ʔstu=g=n | ǰs-k _n n-aay=k |
- what-eye=3PROX=1POSS shirt-body-NMZ=VIS.3PROX
 “What color is my shirt?”

- (1153)
- | | | | |
|----------|--------|----|------------|
| gadənʔs | laǰ | ga | Saanichix |
| ga=d=nʔs | l=(a)ǰ | ga | Saanich=ik |
- be.3PROX=DET=1INCL PREP=ACC 3PROX Saanich=VIS.3PROX
 “I am in Saanich.”

- (1154)
- | | | | |
|------------------------|----------|---------------------|----------|
| ʔəng ^w ida | gaǰεʔ | suǰ ^w da | himayəǰ |
| ʔng ^w =i=da | gaǰ=a=aʔ | s=uǰ=da | him-ay=q |
- who=3DIST=DET come=a=INVIS OBL=3MED=DET food-NMZ=VIS?
 “Who brought the food?”

⁴⁸I do not have many instances of proximals, but for those I have the difference between =*k* and =*ik* seems to depend on the whether the *k* would form a valid consonant cluster or not, with an epenthetic [i] occurring where it would not. We would usually expect a schwa – specifically [i] – here but I nonetheless hear it as a clear [i].

⁴⁹Whether the distal is =*a* (as in Boas) or =*a*? (as in the Kwak'wala textbook series) is unclear to me; it could be the glottal element I hear in =*ε*? is a slight hiatus between the two /a/'s in sequence.

⁵⁰I do encounter =*a*? frequently on non-nominal and tensed nominal arguments (§3.3.3).

(1155) ʔəʔʔeʔdsən λaʔ bigənaʔ
 ʔʔ-ʔeʔsd=n λ=aʔ bign=aʔ
 do-want=1 CONN=ACC bacon=INVIS
 “I want some bacon.” (Powell et al., 1981a, p. 12)

(1156) ʔəʔʔeʔdsən λaʔ badaɣoʔ⁵²
 ʔʔ-ʔeʔsd=n λ=aʔ bada-wayw=aʔ
 do-want=1 CONN=ACC butter-INSTR=INVIS
 “I want a [butter] knife.” (Powell et al., 1981a, p. 24)

I very rarely encounter =aʔ in the form seen above, but I do encounter it frequently in the form =eʔ, probably by coalescence with a preceding a.⁵³

(7u) masi lagileʔs...
 mas=i la-gil=a=aʔ=s
 what=3DIST go-reason=POSS=INVIS=3POSS
 “Why did he...?” (Lit: “His reason... was what?”)

Bach (2006) makes an observation regarding the categories “visible” and “invisible” in Haisla, that these categories sometimes seem to depend on aspects of speaker knowledge rather than visibility per se, and that Boas’s designation of “visible” was made largely without comment (p. 279). He suggests that this distinction might be “basically evidential or modal” instead (p. 267). I think this suggestion is very plausible; when my own consultants talk about a “visible”/“invisible” difference, they are usually talking about the pronominal medial/distal deictic distinction rather than this postnominal “visibility” distinction (cf. Stewart, 2011, who finds that medial and distal deixis largely correspond to being in sensory range of the speaker).

B.4.4.9 Postnominal possessive enclitics

Following the visibility enclitics, we find another set of possessive enclitics:

 =n first person possessive
 (1157) =uʔs second person possessive
 =s third person possessive

⁵²Note here the coalescence of /wa/ to [o].

⁵³I sometimes find =eʔ where I would not expect a previous a; I think for some speakers =eʔ has become the realization of this morpheme in all environments.

I have not encountered the first person singular possessive postnominal on an ordinary nominal argument, but it occurs in the Kwak’wala textbook series, and I have encountered it on other kinds of arguments (§B.6.6.2).

- (1158) $\dot{w}il\dot{?}anal\acute{e}n$ $?umpaq\acute{e}n$.
 $\dot{w}il-(k)n-al=n$ $?ump=a=q=n$
 skinny-body=1POSS father=VIS=1POSS
 “My father is skinny.” (Powell et al., 1981b, p. 15)

- (1159) $\acute{y}ax\acute{e}m\acute{e}n$ $\acute{f}aw\acute{a}n\acute{e}m\acute{e}?\acute{e}n$
 $\acute{y}ak-sm=n$ $\acute{f}ax^w-w\acute{a}nm=a=n$
 bad-class=1POSS love-person=INVIS=1POSS
 “My husband is bad.” (Boas and Hunt, 1905, p. 357)

I have, however, encountered an apparent first person inclusive possessive postnominal, in (1160).

- (1160) *Context: We had been reading and interpreting a Kwak’wala language book belonging to the speaker’s son; afterward, the speaker expressed her approval of the activity.*
- $?ik\acute{e}n?\acute{s}$ $\check{g}^wix?\acute{i}d\acute{e}?\acute{a}sd\acute{e}n?\acute{s}$
 $?ik=n?\acute{s}$ $\check{g}^wi-x?\acute{i}d-w\acute{a}s=xd=n?\acute{s}$
 good=1INCL.POSS INDEF-CHANGE-NMZ=RPAST=1INCL.POSS
 “What we were doing was good.”

The second person possessive postnominal is much more common, although at least for nominal arguments it is optional; sometimes both prenominal and postnominal possessives occur, and sometimes only the prenominal occurs.

- (1161) $\acute{k}i?\acute{s}\acute{e}n$ $\acute{q}o\lambda\acute{a}\check{x}$ $?\acute{e}\check{x}?\acute{a}s\acute{e}s\acute{u}?\acute{s}$ $?\acute{e}b\acute{e}mpo?\acute{o}?\acute{s}$
 $\acute{k}i?\acute{s}=n$ $\acute{q}o\lambda=(a)\check{x}$ $?x^w\acute{a}s=s=\acute{u}?\acute{s}$ $?bmp=a=\acute{u}?\acute{s}$
 not=1 know=ACC do-PLACE=3POSS=2POSS mother=INVIS=2POSS
 “I don’t know where **your mother** is.”

- (1162) $hedas$ $\check{g}^wi\check{g}\acute{e}m\acute{u}?\acute{s}$ $?ump$
 $he=d=as$ $\check{g}^wi-(\check{g})m=\acute{u}?\acute{s}$ $?ump$
 be.3DIST=DET=2 whatever-face=2POSS father
 “You look like **your father**.”

The third person possessive =*s(a)* is not optional here, although it does not occur for the third person “reflexive” possessive (§B.4.4.5), which is indicated by the prenominal =*iʔs* instead.

(1163) *Context: A children’s rhyme, with the same rhythm as “Ladybird, ladybird”.*

dasʔidas,	dasʔidas,	giǰəmeyʔεʔs	ǰʷəyuǰ
das-xʔid=as,	das-xʔid=as,	giq-w mayʔa=aʔ=s	ǰʷyuǰ
dive-CHANGE=3MED,	dive-CHANGE=3MED,	chief-NMZ=a=INVIS=3POSS	duck

“Dive, dive, chief **of the ducks!**”

(1164) lusʔidas	ǰa	nəǰʷʔaneyʔsa	bebi
lus-xʔid=as	ǰa	nqʷ-k _h n-ayʔa=aʔ=s	bebi
uncover-CHANGE=2	ACC	cover-body-NMZ=a=INVIS=3POSS	baby

“Loosen **the baby’s** blanket”

This is almost the same morpheme as the “oblique” case morpheme =*s(a)*, but note that while oblique =*s(a)* conditions the epenthetic enclitic [a], this =*s(a)* does not seem to do so.

B.5 Predicates

Kwak’wala is a predicate-initial language, like Irish, Classical Arabic, or Malagasy; these tend to be called “verb-initial” languages but it is important to be clear that the predicate need not itself be a verb. Kwak’wala predicates are often verbal (1165), but predicates can also be nominal (1166) or adjectival (1167).⁵⁴

- (1165) a. **yəxʷuǰ**
 yxʷ=uǰ
 dance=3MED
 “**He/she/it dances.**”
- b. **həməpuǰ**
 hm-ap=uǰ
 eat-consume=3MED
 “**He/she/it eats.**”

⁵⁴I am not sure which stems are “true” adjectives in Kwak’wala, but we can at least observe that a range of meanings that are expressed by adjectives in English or other familiar languages can be expressed by predicates in Kwak’wala.

(1166) a. **x^wəmdiyuǎ**
x^wmdi=uǎ
otter=3_{MED}
 “It is an otter.”

b. **čədaqǎ**
čdaq=uǎ
woman=3_{MED}
 “She is a woman.”

(1167) a. **d^zaʔstəwuǎ**
d^za-ʔstw=uǎ
blue-eye=3_{MED}
 “He/she/it is blue.”

b. **yaxsəmuǎ**
yak-s(ǧ)m=uǎ
bad-round?=3_{MED}
 “He/she/it is bad.”

Many things that are normally expressed by arguments, or within arguments, in English are expressed as predicates in Kwak’wala, such as WH-words (which are always predicates) and numerals (which are often predicates).

(1168) **wiʔstəwuǎ**
wy-ʔstw=uǎ
what-eye=3_{MED}
 “What color is it?” (Lit: “It is **what color**?”)

(1169) **yudəx^wuǎda**
yudx^w=uǎ=da
three=3_{MED}=DET
 “There are three of them.” (Lit: “It is **three**.”)

Whether a stem is a verb, noun, adjective, WH-word, or quantifier, there is no predicative copula (e.g., “be”) that serves to allow them to be a predicate; the above classes can all be predicates without the addition of any other material. Equative sentences (those that indicate that one entity is identical to another, like “Jon is my father”), however, do need additional

elements; I consider these sentences in greater detail in §4.2.

Locative sentences are also usually predicative. Although Kwak’wala has only one basic preposition (*l-*, which I gloss as *PREP* and translate as “at” here), further information can be expressed by one of a wide variety of positional predicates that express the relative position, posture, and sometimes shape of the entity in question.

- (1170) ʔəxədʔoýuǰda kʷəʔstaǰ la ǰʷa həmndʔoýəǰ
 ʔǰ-_wdʷa-ay̓=uǰ=da kʷ-ʔst=(a)q la ǰʷa həm-_wdʷa-ay̓=q
do-on.surface-NMZ=3MED=DET sit-in.water=VIS PREP ACC.3MED eat-on.surface-NMZ=VIS
 “The cup is on the table.” (Rough lit: “The cup **is-on-a-surface** at the table.”)

- (1171) kʷalamuǰ da waci la ǰa ceya
 kʷ-ala=ʔm=uǰ da was-_hi la ǰa ceya
sit-ONGOING.pos=VER=3MED DET dog-NMZ PREP ACC chair
 “The dog is on the chair.” (Lit: “The dog **sits** at the chair.”)

- (1172) loʔsida ʎəwəls laǰ ʔaʎeyεʔsa qʷaǰ
 ʎaǰʷ-_hs=i=da ʎwls l=(a)ǰ ʔaʎ-aýa=aʔ=sa qʷaǰ
stand-on.ground=3DIST=DET elk PREP=ACC inland-NMZ=INVIS=3POSS tree
 “The elk is behind the tree.” (Lit: “The elk **stands-on-ground** at the inland/forest-side of the tree.”)

- (1173) ʔəǰilbey̓ida ball laǰa waci
 ʔǰ-_wilb-ay̓=i=da ball la=ǰa was-_hi
do-on.nose-NMZ=3DIST=DET ball PREP=ACC dog-NMZ
 “There is a ball on the dog’s nose.” (Lit: “The ball **is-on-nose** at the dog.”)

There are also, however, a class of locative sentences that use the equative construction mentioned above; I examine such sentences in greater detail in §4.4.

B.5.1 Complex predicates

Complex noun phrase predicates (e.g. “is a good man”, “is a new car”, “is a big cat”) seem to be fairly rare, except for ones where the adjectival component is *ʔik* (“good”) or *yaksəm* (“bad”) (§3.4.4).⁵⁵

⁵⁵This is one of the notable ways that Kwak’wala differs from related languages like Nuuchahnulth (Wojdak, 2001) and the neighboring Salishan languages (Demirdache and Matthewson, 1995; Davis, 2011), where complex

(1174) ʔixʔəmxɔdas gənanəma
 ʔik=ʔm=xd=a=s gn-_wanma
 good=VER=RPAST=QUES=2 young-person
 “Were you a good kid?”

(1175) ʔik həməyida ʔuʔəpimas
 ʔik hm-ay=i=da ʔu-ʔup-_himas
 good eat-NMZ=3DIST=DET REDUP-cook-NMZ
 “Berries are good food.”

(1176) ʔaxəmən ʔawənəma bəg^wanəma
 ʔak-sm=n ʔax^w-_wanm=a bk^w-_wanm=a
 bad-class=1POSS love-person=INVIS man-person=A
 “My husband is a bad man.”

(Boas and Hunt, 1905, p. 357)

In fact, speakers go to some lengths to avoid the use of complex nominal predicates, in situations in which we might expect a complex nominal predicate to be the most appropriate expressive choice. Like multiple object sentences (§B.6.2), complex nominal predicates seem to be avoided in favor of a variety of workarounds, like expressing them as two sentences:

(1177) yəwinuḥ^wi Hannah, gəltəḥsti
 yx^w-inuḥ^w=i Hannah, glt-_hḥst=i
 dance-expert=3DIST Hannah, long-end=3DIST
 “Hannah is a dancer; she’s tall.” (Attempt at “Hannah is a tall dancer.”)

Also, we can observe, in Chapter 6, that one means of expressing focus is to make the focus the predicate. However, when a complex nominal like “new car” or “long dog” would be focused, speakers seem to avoid expressing this as a complex nominal predicate of the kind seen above. Instead, speakers use various other sentence types, including expressing the adjective as a predicate, the noun as part of the subject DP, and the background part as an optional relative clause on the subject.⁵⁶

noun phrase predicates are more widespread.

⁵⁶Which answer type speakers use depends on the speaker. Some speakers tend to express this with a verbal predicate with a complex nominal object, as one would in English (e.g. “I saw a black dog.”). It is also possible to express this as two sentences (e.g., “What I saw was a dog; it was black.”).

- (1178) a. *máçaluʔs* *duǰwəluʔs*
más-haɫ=uʔs *dwq^w-wɫ=uʔs*
 what-??=2POSS see-downward=2POSS
 “What did you see?”
- b. *çultuwida* *waci* *ǰən* *duǰwəɫ*
çul-ʔstu=i=da *was-hi* *ǰ=n* *dwq^w-wɫ*
 ash-eye=3DIST=DET dog-NMZ ACC=1POSS see-STIM
 “The/a dog that I saw was black.”

It is possible, however, that (1178b) represents a pronoun-like use of *=ida* in the middle of a complex predicate, and the *ǰən duǰwəɫ* that follows is an appositive (§B.6.5) rather than a relative clause. Sometimes there is reason to believe what follows the determiner is a subject, like postnominal determiners or determiners that are not used pronominally. Sometimes there is reason to believe that what follows is predicative, like a lack of postnominal enclitics on word classes like verbs that, as arguments, appear to require them (§3.3.3). Often, however, it remains unclear.

In general, however, I have not found, for adjectives other than *ʔik* and *yaksəm*, structural equivalents of the sentence (1175), in which the *=ida* would follow the putative complex predicate, suggesting to me (1178b) may not be a complex predicate in the same way that the predicate in (1175) is. I will err towards this analysis – that what follows subject determiners are subjects – and provide the more “literal” translations as if this were the case, but I will avoid basing arguments on examples where the structure is unclear in this way.

B.5.2 Auxiliaries

The main predicate of the sentence may be preceded by one or more “auxiliary” (Anderson, 1984) or “coordinate” (Boas et al., 1947) verbs. The most common of these is *l-*, again based on “go”, and often meaning something like “now”, “then”, or “at this/that time”, but sometimes having little discernible meaning at all (Boas et al., 1947, p. 287), particularly in the ornate rhetorical style seen in Boas’s texts. Other auxiliaries include certain focus-sensitive operators like *ʔo-* (“just”), aspectual verbs like *ǰwal* (“finish”), the negative *kiʔs*, and a reciprocal auxiliary *q^wəlis* (“to do to oneself”).

(1179) ləm̩isən laɫ laχ̣ Mexico
 l=ʔm=is=n l=(a)λ̣ l=(a)χ̣ Mexico
then=VER=and=1 go=FUT PREP=ACC Mexico
 “Then I’m going to Mexico.”

(1180) ʔoʔəm w̩lǎ liʔʔlasənuʔχ̣^w ɸasuʔ
 ʔwa=ʔm w̩lǎ λ̣y-λas=nuʔχ̣^w ɸa-sw̩
so=VER **all** REDUP-glass=1EXCL find-PASS
 “They were all glass, what we found.” (Lit: “That-which-was-found by us was **just all**
 glass.”) (Cranmer and Janzen, 2014)

(1181) ɸ^wəlisʔəmλən nəmug^waλ̣
 ɸ^wlis=ʔm=λ̣=n n̩muk^w-_wad=λ̣
do.to.oneself=VER=FUT=1 friend-REL=FUT
 “I’ll be my own friend.”

There are also auxiliary-like elements that appear to the right of the predicate, like *waxa*. *waxa* is similar, but not identical, to English “try”; it is used in a variety of contexts where the speaker’s attempts or desires were or are being thwarted.

(1182) miχ̣aʔeχ̣sdən **waxa**
 miχ̣a-_neχ̣sd=n **waxa**
 sleep-want=1 **try**
 “I want to sleep, **but I can’t.**”

(1183) ʔolakal ɸax^wəla **waxa**
 ʔwa-la-kal ɸax^w-la **waxa**
 so-ONGOING-very love-ONGOING **try**
 “She really loved him **but couldn’t have him.**”

(1184) t̩əmsən waxaχ̣ Naomi
 t̩ms=n wax=(a)χ̣ Naomi
 call=1 try=ACC Naomi
 “I’m trying to call Naomi.”

A few such elements can occur before or after the main predicate, like ʔug^waq- (“also”), w̩l̩’ (“all, completely, finished”), and ʔoʔəm (“only, just, merely”). It is unclear to me whether

post-predicative *ʔoʔəm* is really an auxiliary to the predicate (§7.3.4.2), but it is not unusual (but also not especially common) to find *ʔug^waq-* after its predicate (1185a) rather than before (1185b).

(1185) a. *ʔəḥəlaʔəmḥoʔoḥ^w* *ʔug^waqḥ* Pate sa *ḷətəml*
ʔḥ-la=ʔm=ḥa=uḥ *ʔug^waq=uḥ* Pate sa *ḷt-(ḡ)m-l*
do-ONGOING=VER=ADD.FOC=3MED **also=3MED** Pat OBL hat-face-wear
 “Pat is **also wearing** a hat.”

b. *ʔug^waqəʔəmḥoʔoḥ^w* Pateḥ *ʔəḥəla* sa *ḷətəml*
ʔug^waq=ʔm=ḥa=uḥ Pate=q *ʔḥ-la* sa *ḷt-(ḡ)m-l*
also=VER=ADD.FOC=3MED Pat=VIS **do-ONGOING** OBL hat-face-wear
 “Pat is **also wearing** a hat.”

While Kwak’wala allows several predicates in a row, to express a sequence of actions, this is not what I am referring to as auxiliaries; the auxiliary *ḡ^wat*, below, results in the meaning “Pat stopped laughing”, not “Pat stopped and laughed”, suggesting that *ḡ^wat* is taking what follows as a semantic argument.

(1186) *ləmuḥ* *ḡ^wat dətəluḥ* Patəḥ
l=ʔm=uḥ *ḡ^wat d-l-l=uḥ* Pat=q
then=VER=3MED stop laugh-ONGOING=3MED Pat=VIS
 “Pat stopped laughing.”

Similarly, the semantic scope of auxiliaries seems to correspond to their linear order; in sentences like (1187) and (1188), the operator that would need to semantically scope over the other operator is also the one that comes first; this would suggest that each auxiliary takes what follows as a semantic argument.

(1187) *kiʔsənuʔḥ^w* *wət həmap* *ḥa q^waḥ*
kiʔs=nuʔḥ^w *wət hm-ap* *ḥa q^waḥ*
not=1EXCL can eat-consume ACC tree
 “We can’t eat trees.”

(1188) *ḡ^wadz^os* *ʔoʔəm k^wala* *laḥ^w,* *qasilela*
ḡ^wa-d^o=s *ʔwa=ʔm k^w-ala* *l=(a)ḥ^w,* *qas-_{eh}yly-ala*
stop-AUG=2 **so=VER** sit-ONGOING.POS **PREP=ACC.3MED,** walk-back.and.forth-ONGOING
 “Don’t just sit there, walk around!”

- (1191) dənχʔinuχ^wi **Hannah**
 dnχ-_hinuχ^w=i **Hannah**
 sing-expert=3_{DIST} **Hannah**
 “**Hannah** is a singer.”

In a simple transitive sentence – again, one without a pre-predicative auxiliary – the subject occurs in between the predicate stem and the object.

- (1192) həmapuχ **Spencer** χa kʉtəla
 hm-ap=uχ **Spencer** χa kʉtla
 eat-consume=3_{MED} **Spencer** ACC salmon
 “**Spencer** eats fish.”

Subjects always precede objects; Sherer (2014, p. 21) uses as one of the criteria for subjects that it is always the first DP in the clause. I also adopt this criterion, but with the caveat that some constructions (like some predicate-modifying enclitics, appositives, and copular sentences) can make it *appear* that another DP precedes the subject; each of these, however, would not violate the requirement that no other DP belonging to the *same* clause precede the subject of the clause.

In more complicated sentences, like sentences with auxiliaries and sentences with complex predicates, there are often several possible positions in which the subject can occur (§B.6.1.1).

Most sentences have at least pronominal subjects, but sometimes sentences have no overt subject or subject marking. This is most frequently seen when several short sentences with the same subject follow one another, as in (1193-1194) but occasionally we can see sentences in isolation without expressed subjects (§B.4.4.3).

- (1193) *Context: We have rolled a set of “story dice” with pictures of items and actions on them, and the speaker comes up with a short narration that includes all of those elements.*

χəpidi gənanəṃ,
 χp-xʔid=i gn-_wanm
 climb-CHANGE=3_{DIST} young-person

χəχələsiʔs q^wəğayu, χələcuʔnuk^w
 χχ-la=s=iʔs q^wq-_wayu χale-c^w-nuk^w
 do-ONGOING=OBL=3_{POSS.REFL} light-INSTR search-PASS-have

“The child climbed a tree, carrying a flashlight, looking for something.”

- (1194) k'əyakuɣ̃^wda gəŋgənanəm, q'əyakaxdaɣ̃^w ɣ̃uɣ̃^wda ball
 kyak=uɣ̃=da gn-gn-_wanm q'yaka=xdaɣ̃^w ɣ̃=uɣ̃=da ball
 kick=3MED=DET REDUP-young-person kick=PL ACC=3MED=DET ball
 “The kids are playing soccer, kicking (pl.) the ball.”

Different speakers have different preferences when it comes to clauses without overtly-expressed subjects; some strongly disprefer clauses without overt subjects, others use clauses without overt subjects more freely.

B.6.1.1 Mobile subjects and enclitic doubling

When the main predicate is preceded by one or more auxiliaries, the subject may either remain *in situ* after the main predicate or appear after the first auxiliary (Anderson, 1984; Littell, 2012).

- (1195) a. ləmisi Bək^wəs nika
 l=ʔm=is=i Bk^w-_hs nika
 then=VER=and=3DIST man-outside say
 “Then **Wildman** said...” (Cranmer and Janzen, 2014)

- b. ləmis niki Bək^wəs...
 l=ʔm=is nik=i Bk^w-_hs
 then=VER=and say=3DIST man-outside
 “Then **Wildman** said...” (Cranmer and Janzen, 2014)

- (1196) a. kiʔsuɣ̃ Katiyəɣ̃ k'əpidsəwə
 kiʔs=uɣ̃ Katiy=q k'p-xʔid-swə
 not=3MED Katie=VIS scissor.motion-CHANGE-PASS
 “**Katie** didn’t get a haircut.”

- b. kiʔsuɣ̃ k'əpidsəwəuɣ̃ Katie
 kiʔs=uɣ̃ k'p-xʔid-swə=uɣ̃ Katie
 not=3MED scissor.motion-CHANGE-PASS=3MED Katie
 “**Katie** didn’t get a haircut.”

When the subject does *not* appear in second position, then an agreement marker can occur in its place (Anderson, 1984; Black, 2012; Littell, 2012; Sherer, 2014); we see this obligatorily with third person distal subjects.

(1197) λumuǰ gəluliqwǰ **Pat**
 λum=uǰ gl-uλ-iq^w=uǰ **Pat**
 very=**3MED** crawl-obtain-NMZ?^{=3MED} **Pat**
 “**Pat** is really a thief.”

(1198) kǰ?sǰ dənǰ?inuǰ^wǰ **Pat**
 kǰ?s=uǰ dnǰ-_hinuǰ^w=uǰ **Pat**
 not=**3MED** sing-expert=**3MED** **Pat**
 “**Pat** is not a singer.”

The appearance of an “agreeing” =*i* seems to depend in part on what element would precede it. When an expected =*i* would immediately follow =*ʔm*, =*i* does not appear (1199), but when separated by =*λ* it does appear (1200).

(1199) *Context: A tableau of brightly-colored wooden men, books, and pigs sits on the table. Most of the people have both books and pigs, except for the blue one.*

ʔoʔəm g^wəsunuk^wida d^zaʔstu babəg^wəm.
 ʔwa=ʔm g^wsu-nuk^w=i=da d^za-ʔstu ba-bk^w-_wm.
 so=VER pig-have=**3DIST**=**DET** blue-eye REDUP-man-DIMIN
 “The blue boy just has a pig.”

(1200) ʔoʔəmλi k^wək^wənix^wgaλi Hannah
 ʔwa=ʔm=λ=i k^w-k^wns-_wk^w-gat=λ=i Hannah
 so=VER=FUT=**3DIST** REDUP-bake.bread-PART-eat=FUT=**3DIST** Hannah
 “Hannah’s just going to eat bread.”

This is peculiar to the third-person distal determiner; the third-person medial determiner appears as expected.

(1201) *Context: On the table there are wooden men of various colors.*

a. ʔoʔəm məʔhida d^zaʔstu
 ʔwa=ʔm mʔh=i=da d^za-ʔstu
 so=VER two=**3DIST**=**DET** blue-eye
 “There’s only two blue ones.”

- b. ʔomũx məʔɦuǰda dʒaʔstu
 ʔwa=ʔm=uǰ mʔɦ=uǰ=da dʒa-ʔstu
 so=VER=3MED two=3MED=DET blue-eye
 “There’s only two blue ones.”

Also, note that this disappearance does not occur when it is the subject’s own =*i* determiner following =ʔ*m*. These instances of =*i* remain regardless of what precedes them.

- (1202) ʔomida gəngənanəṃ liʔloł ǰa həmumu
 ʔwa=ʔm=i=da gn-gn-*w*anm ly-łoǰ ǰa hmumu
 so=VER=3DIST=DET REDUP-young-person REDUP-get ACC butterfly
 “The kids only caught butterflies.”

B.6.1.2 Deriving subject position

If we make the common syntactic assumption that, universally, verbs and objects form a constituent to the exclusion of subjects, then the VSO order we see in Kwak’wala requires an explanation. One possibility is to assume an underlying [Specifier [Head Complement]] structure and raise the verb to a higher position; another is to assume an underlying [[Head Complement] Specifier] structure and suggest that object is somehow extraposed or scrambled rightward.⁵⁷

I will assume the former structure, in part because this kind of movement, or some variant of it, is already necessary to handle the positioning of predicate-modifying enclitics (§B.4.2), of sentential enclitics (§B.4.3), and of DP-internal “postnominal” enclitics (§B.4.4).

- (1203) [[S [V O]]] → [V_{*i*} [S [t_{*i*} O]]]

I likewise assume this for “higher” operators such as auxiliaries (assuming the hierarchical structure in §B.5.2): that subjects that occur directly after auxiliaries are their structural subjects, that auxiliaries likewise raise beyond their structural subjects, and therefore appear linearized before these subjects; I will examine an example sentence of this form in (1206) below.

It is worth considering whether enclisis, alone, is sufficient to motivate verb movement, or whether the verb must raise for other reasons and collects the enclitics as it raises. Consider,

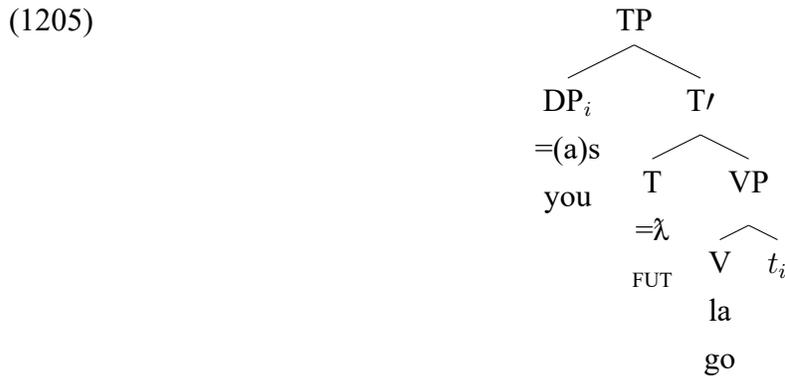
⁵⁷Another possibility would be to assume the VP-internal subject hypothesis and then posit that subjects never move out of their base position. This, however, would raise some questions regarding how the subject gets case, and in any case does not provide much flexibility to account for why subjects can appear in the various positions they do.

A further possibility is to posit that neither *ǰ(a)* nor *s(a)* objects are actually “objects” in the structural sense; that they are a special kind of adjunct, more akin to appositives or prepositional phrases, and simply serve to further describe a covert or unexpressed object. This line of inquiry is interesting, but I do not think it alone would explain subject positioning in Kwak’wala once we get beyond simple VSO sentences.

for example, a simple sentence like (1204).

- (1204) *laλas?*
 I=(a)λ=(a)s
 go=FUT=2
 “You will go.”

Assume a standard SVO-type analysis, in which the subject originates within the VP and raises to the specifier of T.



There is a problem here in that *=(a)s* and *=λ* have no phonological hosts. However, if the verb undergoes head-raising to “collect” these, then all enclitics would have a host and would also happen to end up in the order seen in (622a). Note that all subjects – whether enclitic pronouns on their own or full DPs – at least begin with an enclitic element. The subject therefore cannot be the first item, and furthermore the subject cannot be the element that raises to collect the other enclitics (because it itself begins with an enclitic).

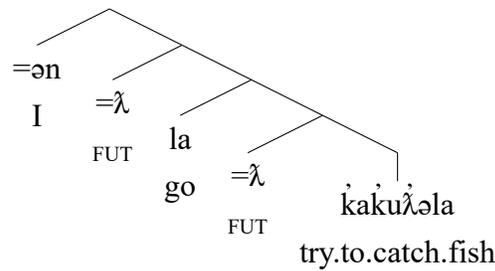
Another thing to note is that avoiding enclitics at the sentential periphery cannot be the sole motivation for their “collection” by the verb. Consider a sentence with an auxiliary, like (1206).

- (1206) *laλən kakuλəlał*
 I=(a)λ=n ka-kuλ_{-h}-I=(a)λ
 go=FUT=1 REDUP-fish-try-ONGOING=FUT
 “I’m going to try to catch fish.”

Let us assume that each of *la* (“go, now, then”) and *kakuλəla* (“try to catch fish”) has its own *=λ*, and that *=λ* has the same relationship to each. For example, let us assume the tree in (1207), and suppose that *la* takes *kakuλəlał* as its complement.⁵⁸

⁵⁸I leave aside here the question of where the subject (*=ən*) moves from, whether as an argument to *la* or to *kakuλəla*.

(1207)



If the only motivation for movement were the avoidance of initial enclitics, the movement of *la* alone should be sufficient. However, this results in **la=λ=ən=λ kakuλəla*, which is not the correct order. Rather, *kakuλəla* also raises to collect its =λ, even though this enclitic has a phonological host in the previous word.

So, either there is simply a morphological constraint against the occurrence of a tense enclitic there, the constraint against initial enclitics also applies within embedded domains, or the verb raises for some other reason. We might, for example, propose that each verb must raise to a dedicated structural position for syntactic reasons, collecting enclitics as it goes, but not moving *in order to* collect those enclitics.

In any case, the consideration of the exact details of, and motivation for, Kwak'wala sentential word order is somewhat beyond the scope of this investigation. For now, it is just necessary to assume some hierarchical structure – I will assume a basic [S[VO]] structure – and some means to relate this structure to the linear order we actually observe – I will assume V-raising.

B.6.2 Objects

When the predicate is a transitive or ditransitive verb, it may take direct or indirect objects; these always follow both the subject and the main predicate. Objects can be introduced by the case markers *ǰ*, *ǰa* (roughly, accusative) or *s*, *sa* (roughly, oblique) (§B.4.4.2).

Although it is possible (e.g. 1113), an =*ǰ* argument and a =*s* argument do not usually co-occur as such in the same sentence (Sherer, 2014); as Boas (1947, p. 281) notes, “On the whole the combination of the verb with both, object and instrumental, is avoided”, and speakers seem to use various means to avoid this construction, like the expression of the erstwhile *ǰa* argument as the object of a preposition.⁵⁹

⁵⁹It should be noted, however, that this does not prevent the co-occurrence of several instances of *ǰa* in the sentence; *ǰa* is a morpheme with various uses – introducing relative clauses, appositives, and some kinds of adjuncts. In the following sentence, for example, *ǰa* introduces the time adjunct *ǰa gəλala* (“in the morning”), even though there is also a *ǰa* object that precedes.

(1209) *čowən ǰasa g^wada laǰuǰ Hannah*
čo=n ǰa=sa g^wada la=ǰ=uǰ Hannah
 give=1 ACC=OBL quarter PREP=ACC=3MED Hannah
 “I gave a quarter to Hannah.”

(1210) *nəp̄iduǰ ǰasa t̄isəm laǰa k̄^wəʔsta*
np-xʔid=uǰ ǰa=sa t̄ism laǰa k̄^w-ʔsta
 throw-CHANGE=3MED ACC=OBL rock PREP=ACC sit-in.water
 “Pat threw a rock at the cup.”

This is similar to what Boas refers to when he notes, “Since Kwakiutl transforms the direct object *q* into the indirect object *laq* whenever the verb takes an instrumental *s*, these forms must be considered as substitutes for the direct object, or as a direct object attached to the coordinate verb *la*” (Boas et al., 1947, p. 284).

Another means of avoiding the expression of both as arguments is to express the =*s* object as an “appositive” (§B.6.5).

(1211) *laǰən k^wiǰʔidəʔol yəsgada k^wiǰayuk^w*
la=ǰ=n k^wiǰ-xʔid=ǰ=ol ys=ga=da k^wiǰ-ayu=k
 then=FUT=1 club-CHANGE=FUT=2ACC REL.OBL=3PROX=DET club-INSTR=VIS.1
 “I shall club you with this club.” (Boas et al., 1947, p. 282)

There are special forms to express accusative and oblique first persons, based on *gaǰ* (“come”): *gaǰən* (first person singular), *gaǰənʔs* (first person plural inclusive), and *gaǰənuʔǰ* (first person plural exclusive). These forms also serve in place of *l-* objects (that is, ones expressed as the object of the preposition *l-* in order to avoid the presence of two objects).

(1212) *qəp̄idas gaǰən*
qp-xʔid=as gaǰ=n
 overturn.container-CHANGE=2 come=1
 “Pour me another!”

(1208) *higamən naqa ǰa kafī ǰa gəʔala*
higa=ʔm=n naqa ǰa kafī ǰa gʔ-ala
 only=VER=1 drink ACC coffee ACC early-ONGOING
 “Only I drink coffee in the morning.”

(1213) wosmasuǎ Kaitlyn gaǎən
 wos-mas=uǎ Kaitlyn gaǎ=n
 sad-CAUS=3MED Kaitlyn come=1
 “Kaitlyn made me sad.”

(1214) cəgitaǎaweyuǎ ǎəta gaǎən
 ck-wit-(a)ǎaway=uǎ ǎy-ała gaǎ=n
 awake-indoors-more=3MED long.time-ONGOING.pos come=1
 “She was awake longer than I.”

B.6.3 Prepositional phrases

Kwak’wala has relatively few prepositions; most locative prepositional meanings are subsumed under the generic preposition *la*, from the root *l-* (“go”), while a variety of positional, locational, and directional roots and lexical suffixes provide additional information.

(1215) lən laǎa ǎuwilas
 l=n l=(a)ǎa ǎuǎ-wit-was
 go=1 PREP=ACC wash-indoors-PLACE
 “I went to the laundromat.”

(1216) ǎəmutuǎda ʔuʔligəns laǎa mǎkʷəla
 ǎmut=uǎ=da ʔwligns l=(a)ǎa mkʷ-la
 howl?=3MED=DET wolf PREP=ACC moon-ONGOING
 “The wolf howled at the moon.”

(1217) laǎən xusʔid laǎən ʔiyaxineʔ
 l=(a)ǎ=n xus-xʔid l=(a)ǎ=n ʔiyax-inay
 go=FUT=1 rest-change PREP=ACC=1POSS work-NMZ
 “I’m taking a break from my work.”

(1218) wɨdʔida ʔika ʔəwɨnagʷis laǎa gukʷilasʔ
 wɨy-dz=i=da ʔik=a ʔw-winagʷ-is l=aǎ gukʷ-(g)i-l-was
 WH-AUG=3DIST=DET good=INVIS so-area-on.beach PREP=ACC house-do-ONGOING-PLACE
 “Where is a good place for building a house?” (lit: “for a house-building place”)
 (Boas and Hunt, 1905, p. 166)

The preposition *q-* is used in many cases where we would use in English “for”: beneficiary arguments, to express motives (Sherer, 2014, pp. 60–61), and to introduce some embedded clauses.

- (1219) ʔomən gəlulʔi ǰa kʷənɪkʷ qəʔən çìʔçàçàya
 ʔwa=ʔm=n gl-uʔ-xʔid ǰa kʷns-_wkʷ qʔ=n çý-çà-çàya
 so=VER=1 crawl-obtain-CHANGE ACC bake.bread-PART for=1 REDUP-REDUP-younger.sib
 “I only stole the bread for my family.”

- (1220) ǰiǰeʔa quʔs
 ǰi-ǰi=a q=uʔs
 REDUP-worry=A for=2POSS
 “worried for you”

- (1221) ʔoxseʔəms gəwalacuʔ quʔs ǰuxçucəwoʔos
 ʔwa=xse=ʔm=s gʷ-ala-cʷ q=uʔs ǰuk-çw-cʷ=a=uʔs
 so=still=VER=2 help-ONGOING-PASS for=2POSS dress-in-PASS=INVIS=2POSS
 “You still need help dressing yourself.” (Lit: “You still are helped for your dressing”)

- (1222) a. laʔəs laǰ Vancouver
 l=(a)ʔ=s l=(a)ǰ Vancouver
 go=FUT=2 PREP=ACC Vancouver
 “You’re going to Vancouver...”
- b. quʔs ləʔoʔs ǰaǰuʔa quʔs kəkətɪmɪtoʔoʔs
 q=uʔs l=uʔs ǰa-ǰoʔ-_ha q=uʔs kə-kət-ɪmɪt=oʔ=uʔs
 for=2POSS then=2POSS REDUP-know-try for=2POSS REDUP-write-attendant=INVIS=2POSS
 “...to learn to be a secretary.” (lit: “...for your learning for your being a secretary”)

The preposition *λw*, surfacing as [λəw] or [λuʔ] depending on syllabification, is used for comitative “with”, and also serves as a conjunction.

- (1223) ǰila kʷagalɪ ʔəwənuʔǰ
 ǰi-la kʷa-gaʔ-_wɪl ʔəwənuʔǰ
 come-ONGOING sit-move.to-indoors **with=1EXCL**
 “Come and sit **with us**.”

(1224) ʔiyaxələn λəw̄uǰ Patəǰ
 ʔiyax-l=n λw̄=uǰ Pat=q
 work-ONGOING=1 and=3MED Pat=VIS
 “I work **with Pat.**”

(1225) mayaʔxəlaǰ ʔoʔs λuʔ ʔəbas
 mayaʔx-l=(a)ǰ ʔoʔs λw̄ ʔbas
 respect-ONGOING=ACC father and mother
 “Respect [your] father and mother.”

B.6.4 Temporal adjuncts

ǰ(a) and variations of it – like *ǰ^wa* in (1226) – also introduces time specifications like “today” or “in summer”.

(1226) w̄igilas ǰ^wa n̄ala?
 w̄y-gi-la=s ǰ^wa n̄ala
 what-do-ONGOING=2 ACC.3MED day
 “What are you doing today?”

(1227) həmsənʔsaǰa hiʔənǰ
 hms=nʔs=(a)ǰa hi-h nǰ
 pick=1INCL=ACC summer-time
 “We go berry-picking in summer.”

(Goodfellow et al., 1991, p. 135)

“Yesterday” and “tomorrow” have special forms (*lənswəl* and *lənsʔeʔ*, respectively) and do not require *ǰ(a)*.

(1228) gaǰən laǰuǰ Ćamasəǰ lənswəl
 gaǰ=n la=ǰ=uǰ Ćamas=q lns-wl
 come=1 PREP=ACC=3MED Victoria=VIS next.day-PAST
 “I came to Victoria yesterday.”

When the time specification is itself a clause (along the lines of “...when *X* did *Y*”), it is expressed using *ləʔe* or *quʔ* (§B.6.6).

B.6.5 Appositives

It is possible to express an argument of the verb in a pre- or post-sentential position, usually separated by an intonational break; both subjects and *ǎ* objects are preceded by *yǎǎ(a)* or *ǎ(a)*, and *s* objects are preceded by *yǎs(a)* or *s(a)*; Boas refers to these as “appositives” (Boas et al., 1947, p. 283).

- (1229) **ǎ duqʷʔaǎǎla** **gaǎǎn**, ǎigəmeʔəmǎǎǎe
ǎ dwqʷ-gʔaǎ-la **gaǎ=n**, ǎiq-w.mayʷ=ʔm=ǎa=i
ACC see-discover-ONGOING come=1, chief-NMZ=VER=ADD.FOC=3DIST
“**The one that saw me** is a chief, too.” (Lit: “**The one that saw me**, he’s a chief too.”)

- (1230) *Context: We are passing around a box of animal crackers, and everyone has taken one. Some of the crackers have already been eaten, but Audra is still holding hers.*

ʔomǎǎ daǎǎǎʔs buffalo, **yǎǎ Audra**.
ʔwa=ʔm=uǎ d-aǎa=ǎ=uʔs buffalo, **y=ǎ Audra**
SO=VER=3MED take.in.hand-ONGOING.POS=ACC=2POSS buffalo, APPOS=ACC
“She’s just holding her buffalo, **Audra** is.”

Since appositives often take the same form as *ǎa* objects (§B.6.2), and of *ǎa* relative clauses (§B.6.6.1), it can be difficult to tease out which is which. However, it does not seem to be the case that all *ǎa* phrases are really appositives. For one, objects and appositives appear in different positions; we can see the object *ǎǎn papaqǎla* (“my sandwich”) before the time adjunct *ǎǎnsǎǎǎ* (“yesterday”), but the appositive *yǎǎǎn ʔǎǎǎǎǎǎǎsuʔxʷdǎǎ?* occurs after the time adjunct.

- (1231) **həmʔidʷas** **ǎǎn** **papaqǎla** ǎǎnsǎǎǎǎǎ,
hǎm-xʔid=as ǎǎ=n **papaqǎla** ǎns-wǎǎǎǎǎ, **yǎǎ=n** **ʔǎǎ-hǎǎsd-sǎǎʷ=xd=a=aʔ**
eat-CHANGE=2 ACC=1POSS **sandwich** next.day-PAST, APPOS=2POSS
ʔǎǎǎǎǎǎǎsuʔxʷdǎǎ? waxa
waxa
do-want-PASS=REC.PAST=a=INVIS try
“**You ate my sandwich yesterday, the one I’d wanted!**”

The intonational break appears to be important as well. For example, the constructed sentence in (1232) was rejected when I did not put an intonational break in the middle; the speaker said that it needed a “comma” in it.

- (1232) *mácałd^zuǰda* *miǰaǰ,* *ǰu?*s *coweǰaqu?*s *gaǰən*
má-s_{-h}al-d^z=uǰ=da *miǰa=q* *ǰ=u?*s *co-aǰ^y=a=q=u?*s *gaǰ=n*
 what-kind-AUG=3MED=DET sleep=VIS, rel=2POSS give-NMZ=a=VIS=2POSS come=1
 “What is that sleeping thing, the one that you gave me?”

This suggest that this sentence is ungrammatical if the *ǰ* phrase is a relative clause headed by *miǰaǰ* (“sleep[ing thing]”), but grammatical if it is an appositive.

B.6.6 Subordinate clauses

B.6.6.1 Relative clauses

Relative clauses in Kwak’wala usually (but not always) follow their head.

Only subjects can be relativized; that is to say, the “head” (be it overt or covert) must be coreferential with the subject argument of the relative clause. For example, for an event of a man stealing a fish, expressing “the man that stole the fish” uses an active verb like *gəluł?id* (“stole”) such that the agent is the subject, whereas expressing “the fish that the man stole” uses a passive verb like *gəluł?icu?* (“was stolen”).

- (1233) a. *wálası* *?ıksuk^wıda* *bəg^wanəm* *gəluł?ı* *ǰe?*s
wálas=i *?ık-suk^w=ı=da* *bk^w-_wanm* *gluǰ-x?ıd* *ǰ=i?*s
 big=3DIST good-appearance=3DIST=DET man-person steal-CHANGE ACC=3POSS.REFL
 kutəla
 kutla
 salmon
 “The man **who stole her fish** was really handsome.”
- b. *wıdıda* *kutəlo?o?*s *gəluł?ıcəwá*
wıd=i=da *kutla=u?*s *gl-uǰ-x?ıd-swá*
 where=3DIST=DET salmon=2POSS crawl-obtain-CHANGE-PASS
 ““Where is the fish **that you stole?**””

Relative clauses are usually headless (“[the one] who stole the fish”); headed relative clauses are surprisingly uncommon given the ubiquity of headless relative clauses. Headless relative clauses are very commonly used in a number of common Kwak’wala constructions; most WH-questions, for example, have headless relative clause subjects. The subject-sensitive restriction on relativization, therefore, has widespread ramifications for the syntax.

(1237) *Context: We were playing a game with animal cards; an elicitor asked what Masaki had just done.*

məʔhuǰ ʔəǰʔaʎudayusuǰ Masaki waci laǰwa
 mʔl=uǰ ʔǰ-(ǰ)aʎ-ud-ayu=s=uǰ Masaki was-hi la=ǰwa
 two=3MED do-move.to-CHANGE-INSTR=3POSS=3MED Masaki dog-NMZ PREP=ACC
 table
 table
 table

“Masaki put two dogs on the table.” (Lit: “The **put-by-Masaki** dogs on the table are two.”)

(1238) ... laε7 daxʔid ǰa paǰa
 ... l=a=i da-xʔid ǰa paǰa
 ... PREP=EMBED=3DIST take.in.hand-CHANGE ACC flat

he ǰwixs səʔukw tisəma ...
he ǰwi-ks səʔukw tisəm=a ...
be.3DIST INDEF-manner board stone=A ...

“...when he took hold of the flat **board-like** stone...” (lit: “the flat **is-like-a-board** stone”) (Boas and Hunt, 1905, p. 8)

B.6.6.2 Temporal clauses

“When” adjunct clauses are expressed by embedded clauses introduced by a particular form of *l-*, *leʔ* or *ləʔe*. This seems to be *l-* (“then, now”), along with an embedding =*a* that occurs in second position.⁶⁰

⁶⁰This is also the form of *l-* we find in the embedded clause-like complements in locative copular statements and questions (§4.4.1).

I do not know whether this “embedding” =*a* can be reduced to any of the numerous other second-position =*a*’s in Kwak’wala. We can also see it when certain other clauses are embedded; the clause corresponding to “you only caught one fish” in (i) has an =*a* after *ʔoʔəm* that would not otherwise be there.

(i) ǰoʎaməgən ʎas ʔomeʔe nəmnuʔs kiʎanəm
 ǰoʎa=ʔm=eg=n ʎa=s ʔwa=ʔm=a=i n̄m=ʔm=uʔs kiʎ-w.anm
 know=VER=?=?=1 CONN=2POSS so=VER=EMBED=3DIST one=VER=2POSS net.fish-obtained
 “I know you only caught one fish.”

- (1239) ʔəng^wiʔs wəʔok^wdoʔoʔs
 ʔng^w=iʔ=s wauk^w=xd=a=uʔs
 who=3DIST=2POSS another=REC.PAST=INVIS=2POSS
 lexdaqʊʔs qasa
 l=a=i=xd=a=q=uʔs qasa
 PREP=EMBED=3DIST=REC.PAST=a=VIS=2POSS walk
 “Who did you walk with?” (Lit: “Who was your companion, when you walked?”)

- (1240) ʔalʔəm λa^wiʔ ləʔe box^wda^ʔʔa,
 ʔal=ʔm λa^ʔw=iʔ l-_h=i bw=(a)xda^ʔʔa,
 late=VER stand=3DIST PREP-NMZ=3DIST leave=PL
 “After they left, Hannah woke up.” (Lit: “She only stood when they left.”)

- (1241) həm^{ap}ida gəla ʔa kʊtəla
 hm^{ap}=i=da gla ʔa kutla
 eat-consume=3DIST=DET bear ACC salmon
 ləʔegən hən^lʔi^ʔ
 l-_h=i=g=n hnλ-xʔid=ʔ
 PREP-NMZ=3DIST=3PROX=1POSS shoot-CHANGE=ACC?
 “The bear was eating the salmon when I shot him.”

Temporal clauses usually come after the main clause, but occasionally come first.

- (1242) *Context: A speaker is narrating her morning.*

ləʔe ǰ^wa^la, lən la^ʔa pədilas
 l=a=i ǰ^wal=a, l=n l=(a)ʔa pt-_wil-_was
 PREP=EMBED=3DIST stop=A, go=1 PREP=ACC medicine-indoors-PLACE
 “When I was finished [baking bread], I went to the pharmacy.”

We can also see temporal adjunct clauses introduced by auxiliaries other than *l-*; “before” adjunct clauses are expressed by *kʊʔs ~ ʔiʔs* along with *=ʔm*, the combination that conventionally means “not yet” (§8.3.4).

- (1243) *cux^wʔida* *ǰuʔs* *ʔug^wina* *ʔiʔsm̄* *aǰuʔs* *la* *gəlǰʔida*
cux^w-xʔid=a *ǰ=uʔs* *ʔug^wina* *ʔiʔs=ʔm=a=ǰ=uʔs* *la* *gəlq-xʔida*
wash-CHANGE=HORT ACC=2POSS body **not=VER=A=V2=2OSS** now swim-CHANGE
“Shower **before** you go swimming.” (Lit: “Wash your body when you have **not yet** swum.”)

The marking of these clauses is similar to the nominal morphology seen in relative clauses, or embedded clauses like we find after *q-* (“for”), except without the prenominal possessive markers (§B.6.6.3). If the markings on these subordinate clauses are based on the postnominal possessive markers, then that would explain their sometime absence, since postnominal possessive markers appear to be optional (or their presence and absence signifies a distinction that I have not managed to discern).

Occasionally, we can also see what appear to be visibility markers on them in the absence of possession markers.

- (1244) *ləmən* *ʔikiqəla* *leʔex* *q̇a* *ǰa* *ləndayu*
l=ʔm=n *ʔik-_hiq-la* *l=a=ix* *q̇a* *ǰa* *lənt-_wayu*
then=VER=1 good-in.self-ONGOING PREP=EMBED=VIS.3PROX find ACC blow.nose-INSTR
“I was happy when I found tissue.”

- (1245) *Context: The speaker, a fan of the Vancouver Canucks hockey team, received as a gift a Canucks-theme clock, which is what she had wanted.*

ʔolakal *ikən* *noqeʔ*
ʔwa-la-kal *ik=n* *noq-a^y*
so-ONGOING-very good=1 heart-NMZ

leʔǰ *loǰaǰuǰda* Canucks
l=a=aʔ=ǰ *la-w-ǰa=ǰ=uǰ=da* Canucks
PREP=a=VIS go-out-obtain=ACC=3MED=DET Canucks
“I was so happy to get the Canucks [clock].” (Lit: “My heart was very good when I got the Canucks.”)

When the event in question has not yet happened, a hypothetical clause (§B.6.6.3) is used instead.

B.6.6.3 Hypothetical clauses

Conditional and hypothetical clauses are introduced with *q=u?*, a combination of *q-* (roughly, “for”) and *=u?*, a hypothetical marker, and often contain *laǰ*, a second-position hypothetical marker.

- (1246) $\dot{\lambda}\dot{\alpha}liwe?nax^w\dot{a}n$ $qu?$ $l\dot{a}?\dot{a}m$ $gagad\dot{x}?\dot{i}di$ Laura
 $\dot{\lambda}\dot{\alpha}l-iway?-nax^w=n$ $q=u?$ $l=?m$ $gak-_{u}ad-x?\dot{i}d=i$ Laura
 forget-??-ever=1 for=HYP now=VER wife-REL-CHANGE=3DIST Laura
 “I keep forgetting if Laura is married yet.”

qu? clauses can also appear initially, just as English “if” clauses can.

- (1247) $qu?$ $\dot{k}isla\check{x}$ $yug^w\dot{a}$, $wigilala\check{x}a?s$
 $q=u?$ $\dot{k}is=la\check{x}$ $yug^w\dot{a}$, $wy-gi-la=la\check{x}=a?s$
 for=HYP not=COND rain what-do-ONGOING=**cond**=2
 “If it weren’t raining, what would you do?”

As noted in §B.6.6.2, these are also used to express future temporal clauses.

- (1248) $yud\dot{x}^w\dot{c}aqila\dot{\lambda}i$ $qu?$ $ga\check{x}$ $da\check{l}$ $ga\check{x}\dot{a}n$
 $yudx^w-\dot{c}aqil=(a)\dot{\lambda}=i$ $q=u?$ $ga\check{x}$ $da\check{l}$ $ga\check{x}=n$
 three-o’clock=FUT=3DIST for=HYP come carry come=1
 “It’ll be three o’clock when she picks me up.”

It seems that there has also been a shift of the 2nd person hypothetical form from *qasu?* to just *qu?s* (so that it is homophonous with *qu?s* “for your”).

- (1249) $?ix?\dot{a}m\dot{\lambda}\dot{a}s$ $qu?s$ $\dot{k}^w\dot{a}mto?\dot{o}?\dot{s}$
 $?ik=?m=\dot{\lambda}=s$ $q=u?s$ $\dot{k}^wmt=a=u?s$
 good=VER=FUT=2 for=HYP.2POSS **smoke**=INVIS=2POSS
 “It’s ok if **you smoke**.” (Lit: “It will be okay, for **your smoking**.”)

- (1250) $qu?s$ $\dot{k}i?s$ bo , $l\dot{a}m\dot{i}sas$ $\dot{k}\dot{a}y\dot{a}g\dot{a}l\dot{s}u?$
 $q=u?s$ $\dot{k}i?s$ bo , $l=?m=is=as$ $\dot{k}y\dot{a}k-g\dot{l}-_h\dot{s}-s\dot{w}$
 for=HYP.2POSS not leave, then=VER=and=2 kick-move.to-outside-PASS
 “If you don’t leave, you’ll be kicked out.”

- (1251) **quʔs** q^wəlyax^wʔiʔ la^ˈtaʔəs ʔi^ˈʔ^wʔiʔ la^ˈʔa
q=**uʔ**=s q^wls-_wak^w-xʔid=ʔ la=t=(a)ʔ=s ʔi^ˈʔ^w-xʔid=ʔ l=(a)ʔa
for=**HYP.2POSS** old-PART-CHANGE=FUT go=but=FUT=2 move-CHANGE=FUT PREP=ACC
k^ˈwaxdəmiʔ
k^ˈa-xdm-_wiʔ
sit-proper?-indoors

“When you get older, then you can move to the [grownup] chair.”

B.6.6.4 “Insubordinate” clauses

Some utterances appear to be embedded clauses without their matrix clause.⁶¹ Various types of utterance appear to have the structure of embedded constituents, especially those that express non-asserted meanings. For example, the construction *quʔ ... =la^ˈʔ* marks “if” clauses (§B.6.6.3), but this structure can be used as its own utterance to mean something like “What if it’s a cat?” or “Maybe it’s a cat.”

- (1252) *Context: Stacey realizes she has to buy food for an animal, but does not know what kind of animal it is.*

quʔ busila^ˈʔ
q=uʔ busi=la^ˈʔ
for=**HYP** cat=**HYP**
“What if it’s a cat?” (Lit: “If it’s a cat.”)

We can find similarly modal meanings expressed by what appear to be normal sentences, except that they are given the postnominal inflections that we might expect of nominalized clauses; the below sentence is expressed using the second-person possessive medial visible postnominal enclitic sequence rather than the second-person subject enclitic that we might expect.

⁶¹Speakers differ significantly regarding the frequency with which they offer these; I think it is likely that some speakers feel that only “complete” sentences should be offered.

B.7 Questions

B.7.1 Yes/no questions

There are several morphemes associated with yes/no questions.

Most yes/no questions (with the exceptions treated in detail in §8.4) involve the “discourse” enclitic =*ʔm*, which I analyze in Chapter 8 as indicative of a polar contrast.

Yes/no questions also have another second position enclitic =*a* that occurs after the tense; this morpheme can be difficult to detect, but in (§B.4.3.4) I offer some evidence that it is present. I am unsure whether this =*a* is in every yes/no question, since it is sometimes difficult to hear.

Some polar questions, particularly second-person ones, also have an =*e* enclitic after a subject pronoun (§B.4.3.8).

B.7.2 WH-questions

WH-words in Wakashan are predicates⁶² (Anderson, 1984); the structure of questions is therefore rather different than in languages where WH-words are syntactic Ds. In a question like (1259), the word *ʔəng^w* (“who”) serves as the sentential predicate; the question can be rendered more literally as “That man is-who?”

- (1259) *ʔəng^wuǰda* *bəg^wanəm?*
ʔng^w=uǰ=da *bk^w-_wanm?*
who=3_{MED}=DET man-person
“Who is that man?” (Lit: “That man is-who?”) (=940)

- (1260) *m̄ac̄aλuǰ*
m̄ac̄aλ=uǰ
what=3_{MED}
“What is that?” (Lit: “That is-what?”) (=941)

Questioning predicates is therefore straightforward: one simply replaces the predicate of an ordinary predicative sentence with a WH-word like *w̄igil-* (“what-do”/“what-make”) or *w̄iks-* (“how-doing”/“how-feeling”):

⁶²In Chapter 4 I observe that one question stem, *w̄y-*, has a use in which the sentence shows copular rather than predicative syntax, so in this case a WH-word is not an ordinary predicate stem. However, the important thing to note is that Kwak’wala WH-words are predicate-like rather than determiner-like.

- (1261) $\dot{w}igila\lambda\text{əs}$
 $\dot{w}y\text{-}gi\text{-}l\text{=}(a)\lambda\text{=s}$
 what-do-ONGOING=FUT=2
 “What are you going to do?” (Lit: “You will do-what?”)
- (1262) $\dot{w}igilase$ $\check{x}\text{ə}n$ $\dot{w}ap$
 $\dot{w}y\text{-}gi\text{-}l\text{=as=e}$ $\check{x}\text{=n}$ $\dot{w}ap$
 what-do-ONGOING=2=QUES ACC=1POSS water
 “What are you doing with my water?” (Lit: “You do-what my water?”)
- (1263) $\dot{w}iksas?$
 $\dot{w}y\text{-}ks\text{=as?}$
 what-manner=2?
 “How do you feel?” (Lit: “You feel-how?”)

Questioning other sentential elements is often more elaborate, since the rest of the sentence must serve as the subject of the WH- predicate. The subjects of WH- predicates are therefore frequently headless relative clauses, with the predicate transformed by passivization or nominalization (§B.3.4) to indicate which element of the clause is being questioned. To put it another way, an argument must be promoted to the subject of the relative clause, in order to question it, as if, in English, we had to transform “I ate [the one]” to “[The one] that was eaten by me” to allow the question “[The one] that was eaten by me is-what?”.

- (1264) $\acute{m}a\acute{c}a\lambda i$ $\acute{d}ulos\acute{w}\acute{\epsilon}?\acute{s}u\check{x}$ Ruby
 $\acute{m}a\acute{c}a\lambda\text{=i}$ $\acute{d}ulo\text{-}s\acute{w}a\text{=a}?\text{=s=}\acute{u}\check{x}$ Ruby
 what=3DIST win-PASS=INVIS=3POSS=3MED Ruby
 “What did Ruby win?” (Lit: “The was-won by Ruby is-what?”)
- (1265) $\acute{m}a\acute{c}a\lambda i?s$ $\acute{d}u\check{x}^w?\acute{a}\lambda\acute{a}qu?s$
 $\acute{m}a\acute{c}a\lambda\text{=i}?\text{=s}$ $\acute{d}uq^w\text{-}?\acute{a}\lambda\text{-}_w\acute{l}\text{-}aq\text{=u}?\text{=s}$
 what=3DIST=2POSS see-achieve-STIM.PASS=VIS=2POSS
 “What do you see?” (Lit: “Your see-stimulus is-what?”)

(1270) wík^halas?
 w^hy-k_ha-l=as
 WH-sound-ONGOING=2
 “What do you sound like?”

(1271) wíx^howas?
 w^hy-x^hu=as
 WH-throat=2
 “What does your voice sound like?”

B.7.3 Periphrastic questions

In general, it is not uncommon for questions to express rather periphrastically what can be expressed (to an English ear, at least) more directly in a declarative sentence. Questions in Kwak’wala involve constructing a DP to refer to something (“that which was eaten by me”, “the one who won”, etc.), such that you can ask for a particular sort of information about it (its identity, its kind, its color, etc.), and it is not always straightforward to construct a DP referring to an arbitrary participant in an event.

For example, “comitative” participants are generally expressed, in a standard declarative sentence, with the preposition $\lambda\acute{w}$ (“with”), as in (1272):

(1272) lən lax̣ Čamas λəwⁱ Sarah
 I=n I=(a)x̣ Čamas λwⁱ=i Sarah
 go=1 PREP=ACC Victoria with=3_{DIST} Sarah
 “I went to Victoria with Sarah.”

There is not, however, an entirely straightforward way to question this participant, and speakers sometimes have trouble coming up with translations for sentences like “Who did you go to Victoria with?” Two possible renderings of this are in (1273) and (1274); respectively, using the suffix $-w\acute{a}t$ (“companion, fellow”) to isolate the accompanying person, or using the word $w\acute{a}ʔok^w$ (“other person(s), person(s) with someone else”).⁶³

⁶³Hall (Hall, 1888a, p. 76) gives several interesting uses of $w\acute{a}ʔok^w$, including referring to people on one’s side [as in some manner of competitive event] and as “some” and “others” in the translation of “Some say (that thou art) John the Baptist, some Elias, and others Jeremiah.”

It is not clear whether $w\acute{a}ʔok^w$ is a reduplication of a stem like $w\acute{a}k^w$ or the addition of $-wuk^w$ (the person classifier) (§B.3.2) to a stem $w-$.

(1273) ʔəng^wuʔs ʔiyaǰwətʊʔs
 ʔng^w=uʔs ʔiyax-wt=uʔs
 who=2POSS work-fellow=2POSS

“Who do you work with?” (Lit: “Your work-fellow is-who?”)

(1274) ʔəng^wiʔs wəʔok^wəs ləʔaquʔs laǰ Ćamas
 ʔng^w=iʔ=s wauk^w=s l-h=aq=uʔs l=(a)ǰ Ćamas
 who=3DIST=2POSS other=2POSS PREP-NMZ=VIS=2POSS PREP=ACC Victoria

“Who did you go to Victoria with?” (Lit: “Your other is-who, when you went to Victoria.”)

There is also not a straightforward way to say “which X”; two paraphrastic attempts are seen in (1275) and (1276).

(1275) ʔəng^wuǰ da bəg^wanəməǰ g^wəsunuk^wa
 ʔng^w=uǰ da bk^w-_wanm=q g^wsu-nuk^wa
 who=3MED DET man-person=VIS pig-have

“Which man has a pig?” (Lit: “The pig-having man is who?”)

(1276) ʔəng^wida pusq̄εʔ laǰ^wa wəʔoçiǰ
 ʔng^w=i=da pus-q̄a=aʔ la=ǰ^wa wʔ-ws-hi=q
 who=3DIST=DET hungry-feel=INVIS PREP=ACC.3MED REDUP-dog-NMZ=VIS

“Which dog is hungry?” (Lit: “The hungry is-who, among these dogs?”)

Boas et al. (1947) noted some examples of “which” questions based on *wid-* questions similar to those seen in Chapter 4, and Hall (Hall, 1888a, p. 78) notes a formulation of a “which” question in which the “participle” suffix *-_winay’* attaches to the subject. *-_winay’* usually produces something like a gerund from verbs, but could apparently be used on nouns to mean something like “kind of”.

(1277) məsi gənənəminay’as?
 məs=i gn-_wanm-hinay’-as
 what=3DIST young-person-NMZ-3POSS??

“Which child?”

There might even be some questions that do not seem to be able to be formed, like “What does he look like?” or “What is he like (in personality)?”. It seems that the language does not happen to have the WH- elements to express these. Although you can ask what someone looks

like in terms of their face (*wʷy-ǰəm*), my consultants could not come up with a question that questions what a person looks like in general (say, whether they are tall, short, thin, fat, etc.) There also doesn't seem to be a straightforward way to make a WH-question about personality traits (whether a person is kind, mean, irritable, anxious, etc.); the closest we could get was to use the “manner” suffix *-ks*, but speakers felt the resulting word *wʷy-ks* questions how a person is feeling instead.

There also do not seem to be direct equivalents of “how” questions, in the sense of “in what manner was this done”. Sometimes (although not always) a “how” question can be expressed as a “what happened” question, as in (1278).⁶⁴

- (1278) *wʷixʔicuʷuʃ* *ləʔeʃ* *loʔanəma*
wʷy-xʔid-sʷ=uʃ *l-h=iq* *loʃ-wanm=a*
 what-CHANGE-PASS=3MED PREP-NMZ=INVIS get-obtained=A
 “How was this [fish] caught?” (Lit: “What happened to this, when it was caught?”)

In general, question formation in Kwak’wala seems to be very dependent on the lexical and morphological inventory – both in the formation of the WH-predicate, and in the formation of the DP subject – and for some ideas there don’t seem to be the exact lexical or morphological resources to form a question about them. There could be specific WH-predicates for (say) personality traits or manner, and there could be constructions that allow these specific aspects of a person or event to be expressed as a DP, but in the absence of both, there does not seem to be a straightforward way to express these exact questions.

B.8 Summary

Kwak’wala morphology and syntax is complex, and there are many topics of potential interest, but for the discussion in the main body of this work, these points are of particular importance:

- Except for a special class of sentences – a particular kind of copular sentence that will be explored in §4.4 – Kwak’wala appears to obey something like the Malagasy “subject restriction on extraction”. When an argument is coreferent with the implicit argument of a lower predication – whether in a relative clause, a question, or a cleft – it must act as the subject of that lower predication.
- Among Kwak’wala’s rich variety of “lexical” suffixes are a number of voice-like suffixes that allow almost any participant in an event to be treated as a subject. These do not form

⁶⁴Henry Davis (p.c.) notes that this is a common strategy among Pacific Northwest languages.

a homogeneous class, but we can observe tendencies in their interpretation depending on the derivational stage at which they attach to the stem (§B.3.4).

- The ordering of basic constituents – verb, subject, object, etc. – is relatively rigid; there are only a few variations on the positioning of constituents, like the ability for the subject to appear either after the main predicate or in second position.
- On the other hand, Kwak’wala speakers have significant freedom when deciding which participants in an event are to be expressed as the predicate, as arguments, etc. Any open-class word (i.e., verb, noun, adjective) can serve as a predicate without need for a copula, and similarly can serve as an argument.

In Chapter 3, I examine in greater detail this “flexibility” – the ability of lexical items to serve as predicates or arguments regardless of class and without copulas – and conclude that there is nonetheless reason to believe that Kwak’wala grammar is sensitive to a noun/verb/adjective distinction. Furthermore, I conclude in Chapter 4 that Kwak’wala does have a copula; although it is not used in the ordinary “predicative” sentence (that is, a sentence with a noun/verb/adjective predicate) that constitute most of the sentences we have seen thus far, there are additional sentential structures that do require copulas.